Academic Stress, Academic Motivation, and Its Relationship on the Academic Performance of the Senior High School Students

Jhoselle Tus
Faculty Member, St. Paul College of Bocaue, Bulacan, Philippines
jhosellepsych@yahoo.com

Abstract
Academic performance is dependent on multiple factors, two of which are stress and motivation. It is an essential aspect for senior high school students as they are nearing college life and because having better academic performance yields better opportunities in life. The study used a descriptive-correlational approach to examine the students' stress and motivation and their relationship with their academic performance. The data was gathered through the Perceived Stress Scale (PSS) and the Academic Motivation Scale (AMS). The study's findings revealed that students' stress and motivation were average and above average, respectively. Moreover, the academic performance of the students was mostly satisfactory and very satisfactory. Furthermore, the study found that stress and motivation have no significant relationship with students' academic performance.

Keywords: *Academic Stress, Academic Motivation, Academic Performance*

1 Introduction

Academic performance is dependent on multiple factors, two of which are stress and motivation. It is an essential aspect for senior high school students as they are nearing college life and because having better academic performance yields better opportunities in life. The context of existing theories on motivation and stress may vary from these for the Filipino and Asian students' unconscious views on motivation, stress, and learning in schools.

Stress is anything that poses a challenge or a threat to the well-being of a person. It can be experienced anywhere, either in-home or even in school. Students are mostly affected by academic stress, as they are subjected to different kinds of stressors, such as the pressure of academics and the obligation to succeed (Noson & Shastri, 2016). According to Kötter et al. (2017), stress negatively affects academic performance and could also become a vicious circle of continually increasing stress and decreasing performance. Thus, motivation is the willingness of a person to do specific tasks. Bruinsma in 2004 (as cited by Kori et al., 2016) stated that higher motivation results in higher academic performance.

A study conducted by Ranasinghe et al. (2017) on academic stress and emotional intelligence on academic performance revealed that academic stress is negatively correlated with emotional intelligence and academic performance. However, other studies claim that stress has no significant relationship with academic performance. A study by Bello & Gumarao (2016) concluded that stress is not correlated with academic performance.

Furthermore, Fereidooni-moghadam et al. (2017) found out that students' achievement motivation is significantly correlated with academic performance. Also, Bolkan, Goodboy & Kelsey (2015) examined the effect of instructor clarity on learning with student motivation and academic performance. The study's findings revealed the positive correlation of instructor clarity, student motivation, and academic performance.

This study's main objective is to determine the relationship of stress and motivation on students' academic performance. The study's findings could serve as a basis for program development to assess how the school could alleviate stress, stimulate motivation, and improve the students' academic performance.

1.1 Research Questions

The study aims to determine the academic stress, academic motivation, and relationship to senior high school students' academic performance.

Specifically, this study sought to answer the following questions:

1. What is the profile of the students in terms of their:

   1.1 academic stress; and

   1.2 academic motivation?

2. What is the level of academic performance of the students?

3. Is there a significant relationship between students' stress and academic performance?

4. Is there a significant relationship between students' motivation and academic performance?

2.0 Review of Related Literature

Stress and Academic Performance

Academic performance is affected by several factors, whether internal or external (Bello & Gumarao, 2016). Stress is one of the factors that affect the academic performance of students. A study conducted by Crego et al. (2016) stated that academic stress might compromise students' performance. Another study conducted by Kötter et al. (2017) mentioned that increased stress leads to decreasing performance, increasing stress. With this, stress is revealed to have a significant relationship with academic performance.

A study conducted by Crego et al. (2016) states that academic stress negatively affects students' performance. Their study aimed to analyze how other variables such as coping strategies and exam-related self-efficacy could be related to academic stress and performance for undergraduate dental students in Madrid, Spain. The study's findings revealed that rational coping strategies such as problem-solving, positive reappraisal, and seeking social support were negatively associated with perceived stress. In contrast, emotional coping strategies such as venting negative emotions and negative auto-focus were positively associated with academic stress. Also, rational and emotional coping strategies were positively and negatively associated with students' exam-related self-efficacy and are partially mediated by the students' perceived stress. The study also found out that a higher level of stress during the examination period was associated with more unsatisfactory average grades and is partially mediated by the students' exam-related self-efficacy. The study then concluded that through adequate coping strategies, stress might be reduced for dental students and, through their effect on exam-related self-efficacy appraisals, may also contribute to improved academic performance.

Another study by Bello & Gumarao (2016) aimed to determine the students' stress level and coping mechanisms and their relationship to academic performance. The results of the study showed that there is no significant relationship between stress and academic performance. However, there is a significant negative relationship between avoidant coping strategies and academic performance. The more avoidant coping strategy is used, the lower the academic performance of the respondents.

A study was also conducted in Lübeck, Germany, by Kötter et al. (2017), it stated that stress and low academic performance could become part of a vicious circle. Thus, the study was conducted to understand and examine the relationship between stress and performance during medical education. The questionnaire used was the Perceived Medical Stress Instrument (PMSS), measured at two different time points (at the end of freshman year and the end of sophomore year). The findings revealed that PMSS scores from 2 and 14 months before the first medical examination were significant predictors for medical students' grades. It was also revealed that age and gender predict academic performance, making older female students a potential risk group to experience the vicious circle of stress and poor academic performance.

Alyami et al. (2017) conducted a study in which they investigated the relationship between self-esteem, academic self-efficacy, and perceived stress to academic performance. It was found out that 71% of the respondents were highly stressed. Most of the respondents also preferred a multimodal learning style. The study also concluded a low yet significant correlation between academic performance and academic self-efficacy. However, the study also found that academic performance does not correlate with perceived stress levels.

The relationship between emotional intelligence, perceived stress, and academic performance and associated factors was explored in a study by Ranasinghe et al. (2017). The study results showed that higher emotional intelligence was associated with better academic performance among final year students. Higher emotional intelligence was also associated with a high level of self-satisfaction. Meanwhile, self-perceived stress was low in those with high emotional intelligence. The study also recommended that enhancing emotional intelligence may help reducing stress levels and improve academic performance.

Gupta, Singh & Kumar (2017) conducted a study that explored the relationship between emotional intelligence, perceived stress, and academic performance. It was revealed in the findings that neither the perceived stress nor emotional intelligence was related to academic stress. However, perceived stress was significantly predicted by emotional intelligence. The researchers concluded that medical students with higher emotional intelligence exhibited lower stress, while both have no significant academic performance relationship.

In another study entitled "Stress and Academic Performance," N & Shastri (2016) identified stress sources among high and low academic performance students. The findings of the study

revealed that the majority of the students' perceived education was stressful. High and low academic performing students and pure and applied science students differed significantly from stress sources. The study's implications and suggestions were discussed, and an enrichment program on stress management was employed.

In 2018, Llego, Gabriel & Corpus conducted a correlational study that explored the relationship of stress level on nursing students' academic performance. The results revealed that the respondents have a moderate level of stress, and the primary source of their academic works was also the primary source of their stress. The researchers concluded that as the respondents' stress level increases, their academic performance decreases.

Motivation and Academic Performance

Motivation is another factor that can affect academic performance (Fereidooni-moghadam et al., 2017). Motivation is a predictor of academic performance (Dogan, 2017). Thus, motivation is essential in academic performance. Higher motivation also results in higher academic achievement (Kori et al., 2016). With this, motivation is likely to have a significant relationship with academic performance.

In a study conducted by Dogan (2017), the extent to which academic performance is affected by student engagement, academic self-efficacy, and academic motivation was evaluated. The results suggested that cognitive engagement predicts academic performance, while emotional and behavioral engagement does not. Furthermore, academic self-efficacy and academic motivation do affect academic performance, with a positive and meaningful relationship.

A similar study was conducted by Çetin (2015), where it was determined whether academic motivation and academic self-regulated learning are predictors of students' GPAs in the Early Childhood Education Department. The study's findings revealed no correlation between GPA and academic motivation and academic self-regulated learning.

Fereidooni-moghadam et al. (2017) conducted a study to assess the relationship between achievement motivation and academic performance. The results of the study showed that there is a significant correlation between academic performance and achievement motivation. It was also revealed that there is a significant negative correlation between achievement motivation, age, and educational terms.

In a study conducted by Bolkan, Goodboy & Kelsey (2015), they tested the notion that the effect of instructor clarity on learning is conditioned upon students' motivation. The study's findings showed that test scores did not increase when students' motivation process was low even with explicit instruction. However, if the students' motivation process was high, and there is explicit instruction, test scores increased. The study concluded that under conditions of high clarity in instruction, students who had higher motivation exhibited higher scores than those who had the lower motivation.

A similar study conducted by Isik et al. (2018) examined if the study strategy was a mediator between the type of motivation and academic performance. The study also examined whether these relations are different for students from different ethnic groups. The study hypothesized that higher autonomous motivation positively correlates with academic performance through deep and achieving study strategy while having a negative association through surface study strategy. The results showed that autonomous motivation is positively associated with GPA by achieving ethnic minority students' strategy.

A study was conducted by Akomolafe & Adesua in 2016, in which they examined the relevance of physical facilities in enhancing the level of motivation and the academic performance of senior high school students in southwest Nigeria. The study's findings showed a significant relationship between physical facilities, students' motivation, and academic performance. The study concluded that high-quality physical facilities could motivate the students in learning, which improves academic performance.

The relationship between motivation, university adaptation, and indicators of mental health, and well-being, and academic performance was explored in a study conducted by Bailey & Phillips (2015). The findings revealed that intrinsic motivation was associated with greater subjective well-being, meaning in life, and academic performance. Extrinsic motivation showed few relationships with other variables, and motivation was associated with poor outcomes.

Kori et al. (2016) conducted a study in which the relationship between prior general education in programming, study motivation, and learning outcomes at higher education level was investigated. It was revealed in the findings that students who had prior knowledge in programming had higher weighted average grades in the first semester. In contrast, students who had no prior

knowledge had external regulation, a subcategory of extrinsic motivation, influencing their studies. Working students also had less motivation and lower results regarding introjected and external motivation, which are also extrinsic motivation subcategories. The study concluded that primary education is advantageous in studies and working during studies is related to lower extrinsic motivation.

Datu (2017) examined peace of mind (PoM) to academic motivation and academic achievement. In the study's findings, peace of mind was positively associated with academic achievement, autonomous motivation, and controlled motivation. It also has a negative relation to motivation. The autonomous motivation was positively associated with academic achievement. The bias-corrected bootstrap analysis results showed that peace of mind had an indirect influence on academic achievement through the mediating effects of autonomous motivation.

The studies cited above have shown how stress and motivation relate to academic performance. Several studies, such as those conducted by Kötter et al. (2017) and by Crego et al. (2016), concluded that stress negatively correlates with academic performance. While in studies by Alyami et al. (2017) and Bello & Gumarao (2016), it was revealed that stress did not correlate with academic performance.

As for motivation, studies conducted by Dogan (2017) and Fereidooni-moghadam et al. (2017) showed a significant positive relationship between motivation and academic performance. In a study by Çetin (2015), it was revealed that academic motivation does not correlate with academic performance.

3.0 Methodology

The study aimed to assess the academic stress, academic motivation, and its relationship to students' academic performance. To determine the relationship between the variables, the method employed in the study was a descriptive-correlation approach. It is an approach that makes use of secondary data for two or more variables from different sources to determine an association between variables (Omair, 2015). It also describes the association or relationship between the variables. The study made use of surveys in the form of questionnaires to gather primary data from the respondents.

Participants

The senior high school students in a Catholic School in Bulacan, Philippines, in School Year 2018-2019, served as the study participants. The total population of the respondents was 130.

Instruments

The instruments used for the study were the Perceived Stress Scale (PSS) by Cohen (1994) and the Academic Motivation Scale (AMS) by Vallerand et al. (1992), which were necessary to quantify the academic stress and academic motivation of the respondents.

The Perceived Stress Scale (PSS) is a scale constructed by Cohen (1994) and is the most widely used psychological instrument for measuring stress perception. It consists of 10 items and is answered through a five-point Likert scale. A study was conducted by Lu et al. (2017) to test its validity. The internal consistency reliability was .85, measured by Cronbach's alpha. Meanwhile, the test-retest reliability coefficient was .7. It was concluded that the scale exhibited satisfactory psychometric properties.

Furthermore, the Academic Motivation Scale (AMS) is a scale that assesses high school motivation, constructed by Vallerand et al. (1992). It contains seven sub-scales, with 28 items assessed through a five-point scale. The validity and reliability of the Academic Motivation Scale (AMS) were tested by Utvær & Haugan (2016). The Cronbach's alpha coefficients of the AMS subscales were revealed to range between .71–.84. Furthermore, the composite reliability of the AMS subscales showed values between .73–.86, supporting the scale's reliability.

Data Collection

In the process of accomplishing and achieving the essential findings of the study in determining the academic stress, academic motivation, and their relationship to the academic performance of students, the following steps were fulfilled to gather the data: A permission letter was submitted to the School Directress's Office to conduct the study and gather the data needed. The instruments were distributed to the respondents. After the instruments were answered, the data were tallied and analyzed. The general average of the respondents during the school year 2018-2019 was gathered to measure the academic performance.

4.0 Results and Discussion

This study's main objective is to assess academic stress, academic motivation, and their relationship with the students' academic performance. Hence,

the Pearson product-moment correlation coefficient was employed.

Respondents' profile in terms of their Academic Stress and AcademicMotivation

In this part, a table was used to describe the respondents' respective profiles concerning their stress and motivation. The tables showed the indicators of stress represented by statements based on the Perceived Stress Scale (Cohen, 1994) and Table 1

Academic Motivation Scale (Vallerand et al., 1992), the mean of the respondents' answers, and the verbal interpretations of the respective means.

The data from Table 1 revealed that the respondents attained average to high mean scores of 1.62 to 2.74. It is noted that the mean of the responses from indicators 4, 5, 7, and 8 was reversed as they are positively stated items, as instructed by the scale.

Respondent's profile in terms of stress

Indicators	Mean	Interpretation
1. In the last month, how often have you been upset because of something that happened unexpectedly?	3.15	High
2. In the last month, how often have you felt that you were unable to control the important things in your life?	2.74	High
3. In the last month, how often have you felt nervous and "stressed"?	3.44	High
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	1.62	Average
5. In the last month, how often have you felt that things were going your way?	1.97	Average
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	2.15	Average
7. In the last month, how often have you been able to control irritations in your life?	2.03	Average
8. In the last month, how often have you felt that you were on top of things?	2.06	Average
9. In the last month, how often have you been angered because of things that were outside of your control?	2.53	High
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	2.53	High
	2.42	**Average**

In all, the average mean was computed 2.42, which had the verbal interpretation of average stress. The findings of the data from Table 2 revealed that the respondents obtained below average to high mean scores, ranging from 3.18 to 6.38. This showed that the motivation of Grade 11 – St. Barnabas students were varied, depending on the specific indicator. In addition to this, most of the indicators had an interpretation of above average, which revealed that the students were mostly motivated.

Table 2
Respondent's profile in terms of motivation

Indicators	Mean	Interpretation
1. Because I need at least a high-school degree in order to find a high-paying job later on.	5.88	High
2. Because I experience pleasure and satisfaction while learning new things.	4.76	Above Average
3. Because I think that a high-school education will help me better prepare for the career I have chosen.	5.53	High
4. Because I really like going to school.	3.50	Average
5. For the pleasure I experience while surpassing myself in my studies.	4.38	Average
6. To prove to myself that I am capable of completing my high-school degree.	5.15	Above Average
7. In order to obtain a more prestigious job later on.	5.88	High
8. For the pleasure I experience when I discover new things never seen before.	5.06	Above Average
9. Because eventually it will enable me to enter the job market in a field that I like.	5.35	Above Average
10. Because for me, school is fun.	3.18	Below Average
11. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	5.03	Above Average
12. Because of the fact that when I succeed in school I feel important.	5.15	Above Average
13. Because I want to have "the good life" later on.	6.38	High
14. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	4.85	Above Average
15. Because this will help me make a better choice regarding my career orientation.	5.41	Above Average
16. For the pleasure that I experience when I am taken by discussions with interesting teachers.	4.29	Average
17. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	4.76	Average
18. To show myself that I am an intelligent person.	4.35	Average
19. In order to have a better salary later on.	6.03	High
20. Because my studies allow me to continue to learn about many things that interest me.	5.26	Above Average
21. Because I believe that my high school education will improve my competence as a worker.	5.50	High
22. For the "high" feeling that I experience while reading about various interesting subjects.	4.76	Above Average
23. Because high school allows me to experience a personal satisfaction in my quest for excellence in my studies.	4.65	Above Average
24. Because I want to show myself that I can succeed in my studies.	5.56	High
	5.03	**Above Average**

In all, the average mean score of the responses was 5.03, interpreted as above average. Thus, the students have above-average motivation.

Respondents' Level of the Academic Performance

This part is composed of a table representing the respondents' level of academic performance. The frequency of each indicator and its percentage is also presented on the table. For school-related studies, knowledge of students' academic performance is essential to discover its relationship with other variables.

Table 3

Academic Performance of the Senior High School Students

Indicators	Frequency	Percentage
90-100 (Outstanding)	18	13.85%
88-59 (Very Satisfactory)	71	54.62%
80-84 (Satisfactory)	38	29.23%
75-79 (Fairly Satisfactory)	3	2.30%
Below 75 (Did Not Meet Expectations)	0	0%
Total	**130**	**100%**

Table 3 showed the academic performance of students, as well as the frequency of each indicator. The data stated that the highest percentage was 54.62%, consisting of 71 respondents with very satisfactory. This was followed by 29.23%, with 38 respondents on the level of satisfactory. The next was 18 respondents, with a percentage of 13.85%, indicated as outstanding. Moreover, a percentage of 2.30% consisted of 3 respondents who were shown to have fairly satisfactory academic performance. None of the students got a failing grade.

Academic Stress, Academic Motivation and their Relationship to Academic Performance

The study aimed to determine if academic stress and academic motivation have a significant relationship with the students' academic performance. The results showed that there was no correlation between stress and motivation on academic performance.

Table 4 revealed that the two-tailed test showed that the significance of stress with academic performance was .763, more significant than the accepted value of .05. The significance of motivation with academic performance had a value of .916, also more significant than the accepted value of .05. This means that there is no significance between the variables. Thus, the null hypothesis of the study is accepted.

Table 4

Academic Stress, Academic Motivation and Its Correlation on Academic Performance

		CORRELATIONS		
		Academic Stress	Motivation	Academic Performance
Academic Stress	*Pearson Correlation*	1	.046	.054
	Sig. (2-tailed)		.796	.763
	N	34	34	34
Academic Motivation	*Pearson Correlation*	.046	1	-.019
	Sig. (2-tailed)	.796		.916
	N	34	34	34
Academic Performance	*Pearson Correlation*	.054	-.019	1
	Sig. (2-tailed)	.763	.916	
	N	34	34	34

** correlation is significant at the 0.05 level (2-tailed)

5.0 Conclusion

Several studies considered stress and motivations as factors that affect the academic performance of students. However, based on the findings, it seemed that the students' stress and motivation did not create any impact on their academic performance.

Specifically, the profile of the respondents in terms of stress was interpreted as average. The students likely have ways of coping, such as hobbies, which mitigate their stress level. Thus, the motivation level of the respondents was above average. It may be inferred that they are motivated since they seek self-fulfillment and personal growth.

Furthermore, the average grades of the senior high school students were mostly satisfactory and very satisfactory. A few students had grades indicated as did not meet expectations and outstanding, while no student had a fairly satisfactory grade. It is possible that they had good study habits and time management, which improved their academic performance.

Thus, findings concluded that there were likely other factors that affected their academic performance. It may be inferred that the school's teaching strategies and education are acceptable to the students. Further, the education and guidance programs employed by the school is helpful.

As such, the study's findings suggest that the school's education and guidance programs should be maintained. The students should also continue their ways of coping, such as hobbies, to mitigate their stress level. Their motivation must also be kept above average, as it drives them to fulfill their needs and grow as persons. Thus, the study recommends that the teachers continue their teaching methods and strategies employed to the students.

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