

College Self-Efficacy and Academic Satisfaction Moderated by Academic Stress

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Abstract

The study sought to investigate if there are significant associations among self-efficacy, academic stress, and academic satisfaction. The study further postulates that academic stress moderate the association between self-efficacy and academic satisfaction. Based on the statistical analysis conducted, there is a positive association between self-efficacy and academic satisfaction, and negative associations with academic stress. However, no interaction effect was observed between self-efficacy and academic stress, leading to the lack of a moderating effect on academic satisfaction. Conclusions and recommendations are presented based on these findings.

Keywords: self- efficacy, academic stress, academic satisfaction, moderation analysis

Introduction

When entering college, students face a number of tasks that not only challenge their academic capabilities but their social and emotional competencies as well. Academic tasks such as conducting research, writing reports, attending classes, reciting in class, problem solving as well as social expectations as interacting effectively with peers, reaching out to mentors, and empowering their personal potentials are only some of the responsibilities that these students are expected to complete. In order to face and overcome these challenges, students need to be equipped with skills and knowledge to ensure their academic success. However, believing in one's capability is of primary importance. The present study posits the crucial importance of self-efficacy in ensuring not only survival but triumph as well.

Self-efficacy is defined as "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" (Bandura, 1977). It refers not to the skills itself but to one's subjective belief of his capabilities of accomplishing tasks. It affects one's motivation and behavior. If a person believes he is capable of facing tasks, then he would readily face this task. However, when his self-efficacy is low, then he tends to avoid the situation. When behavior was explained in the context of behavioristic conditioning, the introduction of self-efficacy sparked a revolution which upholds the cognitive aspects of goal setting and accomplishment. Thus, one's perception of a situation can trigger the success or failure of enterprise. The same can be applied in establishing academic satisfaction.

Few studies have focused on academic satisfaction as an education research variable (Ojeda, Flores, & Navarro, 2011). Nevertheless, academic satisfaction is a crucial factor worthy of study since it is a major basis in determining student well-being and optimal academic achievement. A student who is academically dissatisfied with his educational experience may opt to drop out of school altogether and discontinue their studies. On the other hand, students who enjoy and find

satisfaction in their academic roles would persist and ultimately find academic success. The satisfaction that students find in their academic experience may be traced to their level of perceived efficacy; the challenge of college, their belief in their own abilities, the social and academic reward they obtain out of these experiences may lead to their respective academic success.

However, the presence of stress can greatly impact the perceived relationship between self-efficacy and academic satisfaction. While the presumption is that self-efficacy leads to academic satisfaction (Rayle, Arredondo, & Kurpius, 2005), the presence of stress can negate this relationship. Simply put, if a student strongly believes in himself, which leads him to find satisfaction in his academic endeavours, then stress can prevent this from occurring.

It is the purpose of this study to establish the extent to which academic stress can impact the expected association between efficacy and academic satisfaction. In an fast-paced academic institution such as Mapua, stress can seriously undermine students' efficacious belief and their level of satisfaction for the institute's academic environment. It is expected that at the end of the study, the results can serve to guide the administrators and stakeholders in ensuring the academic achievement of the students by addressing their stress, efficacy, and over-all academic satisfaction.

Review of Related Literature

Since the advent of Bandura's self-efficacy theory, a number of studies have been generated that centered on efficacy either as a predisposing factor of academic performance or an outcome variable from a myriad of sources. Either way, it posits the value of studying efficacy across several domains.

Efficacy has been adjudged to be a contributory factor to academic success (Ojeda, Flores, & Navarro, 2011). Further, family background, specifically family expectations has been a source of one's efficacy. The role of families in encouraging their children to pursue academic success has been consistently espoused in literature. Efficacy has also been found to correlate with personal academic adjustment (Thijys & Verkuyten, 2008), stress and health (Chemers, Hu, & Garcia, 2001), organizational and training commitment (Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991), and self-regulated learning (Zimmerman & Martinez-Pons, 1995). It has also been found to be negatively associated with procrastination, positing that when students feel they are not capable of finishing the task, they fail to manifest self-regulated learning, which leads to procrastination (Tan, Ang, Klassen, Yeo, Wong, Huan, & Chong, 2008). Self-efficacy has also been seen as a significant predictor of academic success, more so than academic stress (Zajacova, Lynch, & Espenshade, 2005). Across these findings, one can surmise that personal efficacy plays a great role not only in academic endeavours but in all situations which challenge personal capabilities.

Efficacy has been seen to be a major predictor of academic satisfaction. In a study conducted among Mexican-American university students (Ojeda, Flores, & Navarro, 2010), self-efficacy has been directly linked to positive affect, academic

progress, environmental support, and academic satisfaction. Specifically, high decision-making efficacy predicted better outcome expectations, which resulted to higher academic satisfaction. Thus, one's confidence in completing tasks needed to be accomplished resulted in positive perceptions of progress, which led to students perceiving their academic experiences as positive rather than negative.

Specific academic tasks also contribute to one's academic satisfaction. In a study conducted among international graduate students, writing was seen as a contributory factor to achieving academic satisfaction. Access to resources, coupled with efficacious beliefs in certain abilities strengthened the academic satisfaction experience by these students. This points to the valuable role of academic administrators and faculty personnel in enhancing efficacy of students as well as imbuing academic satisfaction in their school activities (Colombo, 2011).

Aside from academic services provided to students, program courses and grades also predict academic satisfaction. In a study conducted among college students in Ohio, perceived grade point average, satisfaction with major predicted academic satisfaction, while the isolation index (the extent to which the student felt alone) negatively correlated with the same construct. While efficacy was not included as a separate construct of the study, the value placed on perceived GPA can be surmised as an indicator of the students' perceived ability in the subject. The study concluded that these factors significantly contributed to student persistence and retention in college and that the structural equation model used can serve to aid educational institutions in ensuring positive academic experiences for their students (Aitken, 1982). One such practical implication is coming up with appropriate workload models for students to ensure that despite the academic challenges they face, they maintain their efficacious beliefs, transform these beliefs into academic skills, and guaranteeing their positive academic experiences along the way (Vardi, 2008). Further, domains such as faculty instruction, course advising, availability of courses, and access to small classes were also found to comprise students' academic satisfaction (2002). Academic satisfaction can also be used as an indicator for internal system evaluations of educational institutions; by assessing how students perceive their educational experiences, colleges and universities can use this improve on their procedures and systems (Aldosary, 1999).

Self- efficacy has been studied in conjunction with stress as negatively correlated constructs. That is, higher levels of efficacy are associated with lower levels of stress. This can be observed in studies relating optimism and stress, where a negative association was observed (Huan, Yeo, Ang, & Chong, 2006). However, Dwyer and Cummings (2001) concluded that stress was not associated with self- efficacy and this may be attributed to the utilization of coping strategies that allowed students to successfully hurdle academic tasks, which in turn led to higher levels of self- efficacy.

In collectivistic Asian cultures, it was also observed that Asian students are more inclined to academic competition as means of fulfilling parental and familial expectations, rather than their American counterparts. This can also result to development of self-expectations, where it is common for Asians to imbibe societal

beliefs and expectancies (Ang, Huan, & Braman, 2006). Likewise, they also have a greater likelihood of being anxious and depressive (2006). The same finding was observed among Taiwanese high school students, where increasing academic demands and familial expectations were identified to be major sources of stress (Soong, 2011). Aside from family and personal expectations, academic expectations from teachers and significant mentors also predicted academic stress (Tan & Yates, 2009). Depression has also been found to mediate the relationship between academic stress and suicide ideation among Singaporean adolescents (Ang & Huan, 2006). In this context, stress can be a result of failure to meet societal and family expectations that an individual in a collectivistic culture aims to achieve. Aside from cultural and educational factors, modes of interaction are significant sources of academic stress among Asian students studying in Western universities (Yan & Berliner, 2009). This may lead to poor physical and mental health. In the study conducted among university students in Hongkong, it was found that compared to a Canadian sample, they were more stressed and that a negative relationship was observed between academic stress and health outcomes. The same negative association was observed with optimism and academic stress (Huan, Yeo, Ang, & Chong, 2006). In a study conducted among athletes, academic stress was seen to decrease one's self-efficacy in a purely academic context but enhanced performance in a sports setting (van Raalte, 2012). Even among teachers, efficacy and stress' negative association was evident (Vaezi & Fallah, 2011). Among Indian graduate students, academic stress was believed to cause headaches, sleeplessness, nervousness, and moodiness (Pandaya, Deshpandi, & Karani, 2012). Gender was also perceived to relate to stress, with male students experiencing higher levels of stress as compared with female university students (Akram & Khan, 2012). On the other hand, in a study conducted among American students, females reported greater amounts of stress (Misra & Mackean, 2000). In the same study, time management and leisure enjoyment were seen to have a buffering effect on the perception of stress. Thus, development of programs that would enhance time management skills of students as well as allow enjoyment of leisure activities will ensure reduction of stress, subsequently leading to greater well-being and academic enjoyment.

However, self-efficacy was not observed to have a mediating nor moderating effect on stress and health. The researchers further postulate that self-efficacy as used in majority of theoretical reviews are anchored on Western paradigms; thus, future researches should specifically tackle the impact of self-efficacy, coping, and health among Asian samples that will highlight cultural differences between the two groups (Chan, 2009). Other studies have also focused on course grade, coping, and motivational processes that can reduce academic stress of students (Struthers, Perry, & Menec, 2000). Social support was also cited as seen helping variable to stress, whereas greater perceived social support allowed the individual to manage his academic stress more effectively compared to others with reduced social support (Rayle & Chung, 2007; Baquitayan, 2011). The same can also be said for parental

support, although in some studies it can have negative effects on academic stress (Leung, Yeung, & Wong, 2009).

The above literature highlights relevant literature of efficacy, stress, and satisfaction in an academic context, in both Asian and Western environments. All three variables have been a focus of study in aiming to suggest programs that will enhance student well-being and optimal academic performance. Further, all literature cites the sources of efficacy, stress, and satisfaction but differ in the levels and manifestation of such constructs. For Asian samples, stress is higher since it imbibes familial and societal expectations, which can affect efficacy and academic satisfaction as correlating constructs. Further, social support of family and friends as well as perception toward the academic environment and atmosphere seem to differ between the two samples.

However, the difference of the present study lies on how the variables are treated. Whereas majority of past studies have used self-efficacy as a moderating construct, the present study focused on stress as a moderating factor between the association of self-efficacy and academic satisfaction. Self-efficacy as an intrinsic construct triggers beliefs and behaviors that result in academic satisfaction. In this study, the assumption is that higher levels of self-efficacy lead to high levels of academic satisfaction. However, the question that this study intends to answer is the outcome association of college efficacy and academic satisfaction should academic stress moderate the relationship. Finally, the study also intended to incorporate the negative association between efficacy and stress, which is a frequent methodology in past research. Similarly, the study surmises that higher levels of self-efficacy result to lower levels of stress.

The present study intends to identify levels of college self-efficacy and academic satisfaction and how they are associated with each other, with academic stress as a moderating variable.

It sought to specifically answer the following questions:

1. Does college self-efficacy positively affect academic satisfaction?
2. Does college self-efficacy negatively affect academic stress?
3. Do the interaction of college self-efficacy and academic stress affect academic satisfaction?
4. Does academic stress moderate the association between college self-efficacy and academic satisfaction?

Theoretical / Conceptual Framework

The present study is based on the social-cognitive model of well-being proposed by Lent (2004). According to the model, self-efficacy, outcome expectations, environmental supports, and perceived goal progress contribute in varying levels to academic satisfaction. It integrates cognitive, behavioural, social, and personality variables that are hypothesized to promote positive adjustment across various domains. In this study, academic satisfaction is assumed to be dependent on self-efficacy; however, when academic stress is present, the assumed association might

have been altered. Self-efficacy is construed to be a cognitive and behavioral construct while perception of academic stress may be underlined by social and personality factors. When all of these are aligned, then one can assess academic satisfaction. Given the above framework, the diagram shows the conceptual framework of this study. The study aims to determine whether college self-efficacy positively affects academic satisfaction. Further, would combination of college self-efficacy and academic stress influence academic satisfaction. Lastly, the study would attempt to answer whether the association between college self- efficacy and academic satisfaction is moderated by academic stress.

Method

Research Design

This study intends to make use of the descriptive explanatory design, wherein significant associations among the variables of college self-efficacy, academic stress, and academic satisfaction are explored. The proponent hypothesized that college self- efficacy affects academic satisfaction but can be moderated by perceived academic stress.

Participants

The study included one hundred ninety eight students enrolled in basic courses at Mapua Institute of Technology, an engineering school that has approximately ten thousand students enrolled in twenty courses. Majority of the respondents have been enrolled for at least two terms in Mapua, while a significant number has been studying in the institute for more than a year. Given that the study was coordinated with the Dean of Basic studies, sampling was purposive since the sections included were assigned.

Instruments

The present study employed following instruments in measuring the variables included:

College Self- Efficacy Scale (CSES). This twenty- two (24) item instrument is a self- report measure that has a 4- point likert scale, ranging from unconfident (1) to most confident (4). It assesses a student's ability to accomplish college- related tasks. Based on obtained Cronbach's alpha of .93, .92, and .90 using principal component analysis, it has been deemed to be appropriate, given the significant correlations with academic performance and persistence. With computed Cronbach's alpha of .92, .93, and .90, the instrument has demonstrated strong correlations with academic performance and persistence.

Student Academic Stress. The Student Academic Stress Scale (SASS) is a fifty-item instrument that measures students' attempts to maintain balance through affective, cognitive, physiological, and behavioural means. In a specific study, it has been deemed to be useful in predicting specific academic stress problems among college students. Internal consistency was established, with Cronbach's alpha obtained ranging from .65 to .96.

Academic Satisfaction Survey. Using a seven-item scale, the instrument developed by Lent (2004) assesses the degree of contentment a student has toward aspects of his academic experience. Using a four point Likert scale, ranging from strongly disagree (1) to strongly agree (4), the instrument has been found to possess internal consistency with a Cronbach's alpha of .86.

Procedures

Upon identification of the research design to be employed as well as the variables constructs to be included, a letter was sent to the Dean of the School of Liberal Arts, Humanities, and Social sciences to obtain permission in securing the sections to be included in the study. After securing approval and recommendation, data gathering began. In data gathering, the students were briefed as to the purposes of the study and instructions were given as to how to answer the instruments. Results were then tabulated and analyzed, which became the basis of the findings, conclusions, and recommendations made toward the end of the study.

Data Analysis

In subjecting the raw data to statistical treatment, the mean scores and standard deviations were obtained for the variables of college efficacy, academic stress, and academic satisfaction.

To compute on whether significant associations exist between academic efficacy, student academic stress, and academic satisfaction, Pearson r was employed.

Prior to doing moderation analysis, the data were subjected to Analysis of Variance (ANOVA) in order to categorize the independent variable (College self-efficacy) and moderator (Academic stress) into high and low levels to facilitate moderation, after which it was used to determine whether interaction effects can be observed between these variables. If an interaction effect was observed, the data would then be subjected to moderation analysis by Baron and Kenny.

Results

The following results were obtained from one hundred ninety eight college students, enrolled in basic courses at Mapua Institute of Technology. Out of the total respondents, there were one hundred two (102) females and ninety six (96) males. The mean for the ages was 17.8, which was understandable considering

that these students were in their first or second year of college.

Table 1 presents the mean and standard deviation of self- efficacy, academic stress, and academic satisfaction, as follows:

Table 1
Descriptive Statistics of Self- Efficacy, Academic Stress, and Academic Satisfaction

	<i>M</i>	<i>SD</i>	Range
Self- Efficacy	2.89	.37	1 - 4
Academic Satisfaction	3.17	.47	1 - 4
Affective Stress	2.65	.64	1 - 5
Behavioral Stress	2.41	.57	1 - 5
Physiological Stress	2.40	.54	1 - 5
Cognitive Stress	2.38	.65	1 - 5

Based on the range of scores, the mean scores for self- efficacy and academic satisfaction fall in the high end of the range, indicating high levels while the mean scores for the domains of stress (affective, behavioral, physiological, and cognitive) fall within the middle/average range.

To determine whether significant associations exist between college self- efficacy, academic stress, and academic satisfaction, Table 2 is presented:

Table 2
Correlation Matrix among Self- Efficacy, Academic Satisfaction, and Academic Stress

	1	2	3	4	5	6
1 Self- Efficacy	1					
2 Academic Satisfaction	.24*	1				
3 Affective Stress	-0.17*	-0.26*	1			
4 Behavioral Stress	-0.31*	-0.29*	0.77*	1		
5 Physiological Stress	-.021*	-0.24*	0.70*	0.72*	1	
6 Cognitive Stress	-0.23*	-0.36*	0.72*	0.77*	0.78*	1

* $p < .05$

Based on the above table, there is a positive association between self- efficacy and academic satisfaction, with a correlation coefficient of .24 which is significant at the .05 alpha level. Thus, self- efficacy influences one's academic satisfaction. The more an individual perceived himself as capable, the perception toward academic experiences is more likely to be positive.

With regard to self- efficacy and the four domains of academic stress, it is hypothesized that higher levels of self- efficacy is associated with lower levels of stress and vice versa. The obtained correlations between self- efficacy and stress are -.17 (affective), -.31 (behavioral), -.21 (physiological), and -.23 (cognitive).

The same results were also obtained for stress and academic satisfaction:

that is, higher levels of stress are associated with lower levels of academic satisfaction and vice-versa. With obtained correlation coefficients of -.26, -.29, -.24, and -.36, this is not surprising considering the positive correlation between self-efficacy and academic satisfaction and the negative association between self-efficacy and academic stress.

To determine whether there are interaction effects between college self-efficacy and each domain of academic stress, the following table is presented below:

Table 3
Interaction Effects of Self-Efficacy and Academic Stress

	SS	MS	F	p
Self- Efficacy	.62	.62	3.01	.084
Affective Stress	1.54	1.54	7.427	.007*
SE*AFF	.163	.163	.79	.37
Self- Efficacy	.27	.27	1.35	.25
Behavioral Stress	1.92	1.92	9.32	.002*
SE*BEH	.12	.12	.57	.45
Self- Efficacy	.67	.67	3.16	.07
Physiological Stress	.58	.58	2.73	.09
SE*PHY	.00	.00	.00	1.00
Self- Efficacy	.73	.73	3.53	.06
Cognitive Stress	1.42	1.42	6.90	.009*
SE*COG	.45	.45	2.18	.14

*p<.05

Based on the table, no significant interaction effects were observed between self-efficacy and affective stress (.37), behavioural stress (.45), physiological stress (1.00), and cognitive stress (.14) since the values obtained went beyond the .05 alpha level. However, as individual predictors, affective stress, behavioural stress, and cognitive stress influence academic satisfaction, p values that is lower than .05 alpha level (affective = .007; behavioural = .002; cognitive = .009). Thus, emotions associated with stress, behavioural responses to stress, and thoughts accompanying stress influence one's perception of his academic experiences, which lead to his academic satisfaction. Since no interaction effect was observed, then the fourth hypothesis is rejected; that is, academic stress does not moderate the association between college self efficacy and academic satisfaction. Thus, it is no longer necessary to perform a moderation analysis.

To determine whether college self- efficacy and academic stress predict academic satisfaction, the following table presents the multiple regression conducted for all three variables:

Table 4
Multiple Regression of Self- Efficacy, Academic Stress, and Academic Satisfaction

	Beta	B	t(191)	p-level
Self- Efficacy	0.18	.23	2.53	0.012*
Affective Stress	-0.04	-0.03	-0.41	0.68
Behavioral Stress	0.08	0.06	0.05	0.95
Physiological Stress	0.13	0.11	1.15	0.25
Cognitive Stress	-0.39	-0.28	-3.16	0.001*
R = .401 R ² =.161 Adjusted R ² = .14 F(5,191)= 7.32				

$p < .01$

The results indicate that overall self-efficacy and factors of academic stress can predict academic satisfaction $F(5,191) = 7.321, p < .000$. Thus, the third hypothesis is accepted; that is, both college self- efficacy and academic stress affect academic satisfaction. However, as individual predictors, only self-efficacy significantly predict academic satisfaction ($B = 0.23, p = .012$). Similar to the results of the previous section, higher levels of self- efficacy result to higher levels of one's academic satisfaction. Also, among the factors of academic stress only cognitive stress significantly predict academic satisfaction ($B = -0.28, p = .001$). Since the association is negative, higher levels of cognitive stress negate one's academic satisfaction. Lastly, no combined effect was seen among each of all the variables tested. Thus, when self- efficacy is tested in conjunction with each domain of academic stress, no association with academic satisfaction is established.

Discussion

Based on the above results, college self- efficacy and specific forms of academic stress predict academic satisfaction. The association among these variables is not surprising, given that previous literature have established the positive correlation between self- efficacy and academic satisfaction and the negative correlation between self- efficacy and academic stress.

In the case of self- efficacy and academic satisfaction, it can be surmised that when an individual is confident of his own abilities in addressing specific tasks and situation, then he is able to overcome these, leading to his being satisfied with his academic experiences. On the other hand, when a person lacks the confidence to do such tasks, then he may perceive his over- all education experience in a negative manner. Similar to the findings generated among Mexican- American students, self- efficacy lead to academic progress and positive outcome expectations, leading to academic satisfaction (Ojeda, Flores, & Navarro, 2010).

Another explanation behind the significant association is the link of self- efficacy to self- regulated learning. Indeed, high levels of efficacy have been found to be a contributory factor in self- regulated learning (Zimmerman & Martinez- Pons, 1995). Inversely, poor self- efficacy contributes to procrastination (Tan, Ang,

Klassen, Yeo, Wong, Huan, & Chong, 2008). Since academic satisfaction expresses one's contentment in his academic experiences, being able to fulfil the academic expectations and attain academic success may be a requisite toward attaining such satisfaction.

In establishing the negative association between self-efficacy and academic stress, past literatures have already cited several reasons for this. When stress is present, an individual's self-confidence decreases. The same negative association was observed with optimism and academic stress (Huan, Yeo, Ang, & Chong, 2006). When a person feels he is capable of doing a certain task, then he perceives problems and tasks as non-threatening. However, when a person perceives his tasks as draining and exhausting, then his belief in himself to overcome the problem can be endangered. This is observed both for students and educators as well (Vaezi & Fallah, 2011).

No significant interaction effects were observed for self-efficacy and academic stress as it relates to academic satisfaction. While self-efficacy and academic stress influences academic satisfaction independently, no combined effects for the two were generated. Academic stress, when present, negates one's academic satisfaction. In the presence of stress, individuals may find dissatisfaction in the educational experiences he encounters. When a person experiences anxiety, tiredness, depression, then his perception toward his academic environment and the experiences attached to it is likely to be negative.

The lack of a combined effect for efficacy and specific forms of stress may be attributed to other factors that are closely related to these two factors. While an over-all effect for the two factors was achieved based on the multiple regression, there might be other factors imbedded in those variables that could explain the over-all effect. A significant number of literature has pointed to coping strategies (Struthers, Perry, & Menec, 2000) and presence of social support (Rayle & Chung, 2007; Baquitayan, 2011) as anchoring variables toward the assumed associations among efficacy, stress, and academic satisfaction. These may be anchored on cultural differences that lie between two different ethnic groups: Asians and westerns (Chan, 2009). Self-efficacy and academic stress has been popularly studied as a Western construct. Definition of these constructs may be different when cultural contexts are taken into consideration. For one, among Western respondents, stress may be anchored on pressures placed by society and significant models when they want to express their independence, while for Asian respondents, stress may be defined as the inability to meet expectations when they have imbibed the social values of their family and significant mentors. Thus, the specific and individual combined effect that is investigated in this study may not be applicable to the cultural context on which this study is based on.

Given the findings that self-efficacy is positively associated with academic satisfaction, while negatively associated with academic stress, and no combined effect when they were tested individually with each other, it is imperative that issues concerning these variables need to be addressed.

For one, programs and services should be offered that would enhance the self-efficacy of students and lessen their academic stress in order to guarantee their academic satisfaction. Previous literature has cited that educational institutions play a role in enhancing the learning and academic experiences of students (Aitken, 1982; Aldosary, 1998; Vardi, 2008). By ensuring that students perceive their academic experiences positively, learning will be enhanced and educational institutions can use these mechanisms for feedback and monitoring processes for their evaluation and subsequent improvement.

Findings of this study can be used by students in improving their academic-related behaviours, such as improving study habits, involvement in extra-curricular activities, consultation with teachers and mentors, and active participation in classroom discussions. Self-efficacy has been found to be most evidence in these academic behaviours. Thus, imbibing in these behaviours can increase self-efficacy and lessen the negative perception toward these behaviours as sources of academic stress.

Lastly, academic satisfaction is anchored on a number of factors that are not only academic in nature. The lack of a combined effect between self-efficacy and academic stress may point to other factors that serve to sustain academic satisfaction. Thus, future studies can pursue other lines of query beyond what the present study investigated. Health outcomes, family expectations, social support, coping strategies, educational programs and services are just some of the variables future studies can study.

Results of the study can be used as part of the instructional methodologies employed by educational institutions in order to enhance the academic experiences of the students at the classroom level. Self-efficacious beliefs are anchored positive perceptions of one's academic abilities; thus, educators and administrators can incorporate strategies to enhance self-efficacy inside the classroom.

Counseling and other support services can also enhance their programs and interventions in ensuring that students' experience of academic stress is lessened, thus guaranteeing higher self-efficacy and academic satisfaction. Lastly, cultural undertones of self-efficacy, academic stress, and academic satisfaction can be pursued. Cultural understanding of these factors can contribute to more holistic literature in educational psychology.

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APPENDICES

COLLEGE SELF-EFFICACY INVENTORY

The following tasks are common to college students. On a scale of 1 – 4, rate your confidence in accomplishing these tasks. Please be guided by the following:

1 – Unconfident 2 – Undecided 3 – Somewhat Confident 4 – Totally Confident

1. Make new friends at college.	1	2	3	4
2. Talk to your professors/instructors.	1	2	3	4
3. Take good class notes.	1	2	3	4
4. Divide chores with others you live with.	1	2	3	4
5. Research a term paper.	1	2	3	4
6. Join an intramural sports team.	1	2	3	4
7. Understand your textbooks.	1	2	3	4
8. Get a date if you want one.	1	2	3	4
9. Ask a professor or instructor a question outside of class.	1	2	3	4
10. Get along with others you live with.	1	2	3	4
11. Write a course paper.	1	2	3	4
12. Work on a group project.	1	2	3	4
13. Socialize with others you live with.	1	2	3	4
14. Do well on your exams.	1	2	3	4
15. Talk with a school academic and support (e.g., advising) staff.	1	2	3	4
16. Manage your time effectively.	1	2	3	4
17. Use the library.	1	2	3	4
18. Join a student organization.	1	2	3	4
19. Ask questions in a class.	1	2	3	4
20. Divide space in your residence.	1	2	3	4
21. Participate in class discussions.	1	2	3	4
22. Keep up to date with your school work.	1	2	3	4

Gender: () Male () Female

Age: _____

ACADEMIC SATISFACTION SCALE

The following statements generally describe how satisfied you are with your academic experience at MIT. On a scale of 1-4, please rate your degree of satisfaction. Please be guided by the following:

1 – Strongly Disagree

2 – Disagree

3 – Agree

4 – Strongly Agree

1. I feel satisfied with the decision to major in my intended field.	1	2	3	4
2. I feel satisfied in choosing to study at Mapua.	1	2	3	4
3. I feel satisfied with the academic support services offered by Mapua.	1	2	3	4
4. I am comfortable with the educational atmosphere in my major field.	1	2	3	4
5. For the most part, I am enjoying my coursework.	1	2	3	4
6. I am generally satisfied with my academic life.	1	2	3	4
7. I enjoy the level of intellectual stimulation in my courses.	1	2	3	4
8. I feel enthusiastic about the subject matter in my intended major.	1	2	3	4
9. I like how much I have been learning in my classes.	1	2	3	4
10. I feel my professors are very competent.	1	2	3	4
11. I learn much from my professors.	1	2	3	4

STUDENT ACADEMIC STRESS SCALE

The following statements refer to feelings and experience of stress related to academic works. Please rate the following on a scale of 1 – 5, based on your own personal experience as a student. Please be guided by the following:

1 – None 2 – A little of the time 3 – Some of the time 4 – Most of the time 5 – All of the Time

1. My work built up so much that I feel like crying	1	2	3	4	5
2. I feel emotional	1	2	3	4	5
3. My emotions stop me from studying	1	2	3	4	5
4. I yelled at family or friends	1	2	3	4	5
5. I feel emotionally drained by academic institution	1	2	3	4	5
6. I feel I was lazy when it came to academic work.	1	2	3	4	5
7. I procrastinated on assignments	1	2	3	4	5
8. I am been distracted in class	1	2	3	4	5
9. I am unable to study as required	1	2	3	4	5
10. I have trouble concentrating in class	1	2	3	4	5
11. I try to avoid class if possible	1	2	3	4	5
12. I use alcohol or drugs to enable me study well	1	2	3	4	5
13. I have trouble remembering my notes .	1	2	3	4	5
14. I couldn't breathe .	1	2	3	4	5
15. I have difficulty eating .	1	2	3	4	5
16. My hands are sweaty .	1	2	3	4	5
17. I have had a lot of trouble sleeping	1	2	3	4	5
18. I have headaches	1	2	3	4	5
19. I feel overwhelmed by the demands of study	1	2	3	4	5
20. I feel worried about coping with my studies	1	2	3	4	5
21. There is so much going on that I can't think straight	1	2	3	4	5
22. I miss too many of my lectures	1	2	3	4	5
23. I don't enough time in studying	1	2	3	4	5
24. I am not really sure am interested in reading	1	2	3	4	5
25. At times am unable to express myself in words	1	2	3	4	5
26. I am afraid to speak or discuss in the lecture room	1	2	3	4	5
27. I feel the academic program is too burdensome for me	1	2	3	4	5
28. I can't keep my mind on my studies .	1	2	3	4	5
29. I have trouble studying effectively .	1	2	3	4	5
30. A times I don't feel like studying .	1	2	3	4	5
31. I feel am too slow in reading compared to others .	1	2	3	4	5
32. I worried too much about marks to obtain in my examination	1	2	3	4	5
33. I feel am getting low marks	1	2	3	4	5
34. I would like to stop going to school	1	2	3	4	5
35. I have no stable place to study	1	2	3	4	5

36. I don't really like my course of study	1	2	3	4	5
37. I feel some textbooks are too hard for me to understand	1	2	3	4	5
38. I feel some lecturers are too hard for me to understand	1	2	3	4	5
39. I feel so much restless while receiving lectures	1	2	3	4	5
40. There are not enough good books in the library	1	2	3	4	5
41. Too much work is required in some courses	1	2	3	4	5
42. I feel am not getting along with some lecturers	1	2	3	4	5
43. I feel some lecturers lack interest in their students	1	2	3	4	5
44. Some courses are too dull and boring	1	2	3	4	5
45. Some lecturers are not friendly to students	1	2	3	4	5
46. I feel lecturers are not considerate of students' feelings	1	2	3	4	5
47. Some lecturers give unfair tests to students	1	2	3	4	5
48. I feel I have poor memory	1	2	3	4	5
49. I have trouble making up my mind about my academic work	1	2	3	4	5
50. I am too forgetful and easily discouraged about academic	1	2	3	4	5