

Academic Anxiety and Its Mediation on Self-Efficacy and Learners' Autonomy Among High School Students

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ACADEMIC ANXIETY AND ITS MEDIATION ON SELF-EFFICACY AND LEARNERS' AUTONOMY AMONG HIGH SCHOOL STUDENTS

Abstract: Students lives revolved around deadlines, pressure, and success. Although, the complexity of student's experiences varies from one context to another, it is imperative for educators to determine the desired learning needs of the students. This study aimed to examine whether academic anxiety mediates the relationship between self-efficacy and learners' autonomy among Philippines High School Students. The participants in this study included 200 participants from De La Salle Medical and Health Science Institute. This study utilized predictive cross-sectional design and mediation model. The results showed that the students exhibited high self-efficacy and learner autonomy and moderate academic anxiety. Also, the results indicated that there were significant relationships between self-efficacy and academic anxiety; self-efficacy and learner's autonomy; and academic anxiety and learner autonomy. Furthermore, the study found that academic anxiety mediated the relationship between self-efficacy and learner autonomy. The study's findings revealed that academic anxiety may a mediating factor on how students believe in their capabilities and feel confident to succeed academically which is a key indicator to increase learner's autonomy. Using academic anxiety as a mediating variable, self-efficacy and learners' autonomy seem to be important factors in predicting academic success.

Keywords: Academic anxiety, self-efficacy, learner' autonomy, positive learning

Introduction

Emotions are known as a human being's natural response towards past, present, and future events, and these are a naturally recurring phenomenon even in academic settings (England, 2019). Students are conscious of their academic accomplishments, but a feeling of fear and anxiety can have a detrimental effect on their performances. Wang & Rashid (2021) states that a student's academic motivation is a common denominator that connects self-efficacy and test anxiety to each other. Furthermore, it was elaborated in the same study that students who strive for academic excellence have high level of motivation, which in turn increases Academic Anxiety; and a student's level of motivation may be high if its abilities and competencies are assisted by Self-Efficacy. As stated by Esteban *et al.* (2022), the relationship of psychological distress and anxiety to study satisfaction displays a negative relationship; these are statistically recognized as significant despite their weaknesses. According to a study conducted by Esteban *et al.*, (2022), students' manifest satisfaction when they have lower levels of anxiety than those who have higher levels. Consequently, when it comes between psychological distress and study satisfaction this is not the case. Based on the research conducted by Chuang *et al.* (2022), assuming that Academic Anxiety and Fear of Failure are related, a variety of factors influence them either adversely or favorably, hence influencing Self-Efficacy. There is a need to study these relations to clarify the entirety of such concepts and to hopefully produce ways to create how people can be more aware of their efficacy.

The relationship between Self-Efficacy and learner Autonomy according to Dong and Mustapha (2020) is primarily influenced by Self-Efficacy and learning motivation. Improving Self-Efficacy is an important goal for increasing student learner Autonomy. As a result, the study of Academic Self-Efficacy, a controllable psychological factor, has some practical implications for improving learner Autonomy.

As stated in Girelli *et al.* (2018), Motivational Autonomy is described as behavior done for one's own joy, interest, and fulfillment. It thus links to Self- Efficacy, which is defined as a person's ability to believe in oneself. These

two aspects are linked by Self-Determination Theory because if a person accomplishes something in their own self-interest, it will boost their motivation and raise their Self-Efficacy. As elaborated by Xiao (2021), a student who currently attains Self-Efficacy is in line with the characteristics of an autonomous learner. A learner garnering a high level of Autonomy is described as a person that can take responsibility, is able to set goals, has self-government, and is able to reflect and evaluate on their performance. A student having the capacity to believe that they can accomplish tasks, means that they are already autonomous.

Academic Anxiety and learner Autonomy are connected to each other through the standpoint of a student's learning process. Gunes and Alagozlu (2020) describe that students must take part and control over their learning journey to be able to identify suitable methods for themselves. This statement can be further emphasized by the relation of Academic Anxiety as the research states that learner Autonomy may benefit a student's process effectively, then, in turn Academic Anxiety can make an impact on the process as well, making them have an inverse relationship in a learning process context. Academic Anxiety is the opposite of a learner or student having complete Autonomy of himself or herself. A student experiencing Academic Anxiety is affected in ways according to Jannata and Nur'aeni (2020). Distracted focus and attention, excessive worry, stress, interruptions, and procrastination of academic work can all have an impact on academic progress. A student who experiences these phenomena cannot fully function as an autonomous learner, as they will be greatly affected in various ways. According to Kunst et al. (2019), being an autonomous learner entails being able to adapt to certain teachings or class situations, increasing self-awareness, and decreasing sensitivity, particularly to academically relevant matters.

To delve much deeper in these cases according to Xiao (2021), exploring these fields of possible factors influencing the variables, and their impact on learners will provide a basis for observing the relationship of these variables. In addition, to study this phenomenon, which in this case is having high Academic Anxiety, will result in a learner becoming a much less likely candidate to become autonomous learner and obtain a better achievement. This may provide necessary information to be able to relate the variables to one another.

Objectives of the Study

Generally, the study sought to determine the relationship between personality traits and the stress level of senior high school students and how academic anxiety mediates self-efficacy and autonomy of the participants.

Hypothesis

The following hypothesis was to be tested to accept or reject the proposed study on the relationship of personality traits and stress levels and the mediation of academic anxiety to self-efficacy and autonomy.

Conceptual Framework

The paradigm reflects the study's main aim on correlating personality traits and stress level and what relationship each has with the other. It provides an overview of the study, wherein it displays the role of Academic Anxiety as the mediator between the relationship of the variables Self-Efficacy and Autonomy. The variables Self-Efficacy and Autonomy correlate with one another directly and are both affected by Academic Anxiety in an indirect relationship. According to Ganie *et al.* (2021), there is a significant relationship between Academic Anxiety and Self-Efficacy according to various studies. It was said that the more Self-Efficacy, the less Academic Anxiety and vice versa, forming an inverse relationship between the two variables. Meanwhile, according to Tabassam & Azhar (2020), Self-Efficacy and Autonomy has a direct relationship with one another, this is because when the students are aware of their capacity to do a certain task, they will be able to perform it in a better way. In a study by Kunst et al. (2018), Autonomy deficit is characterized by an individual's vulnerability towards different forms

of psychopathology which includes anxiety. In a similar case, if a learner therefore experiences a deficit in Autonomy, then chances of vulnerability towards Academic Anxiety is high.

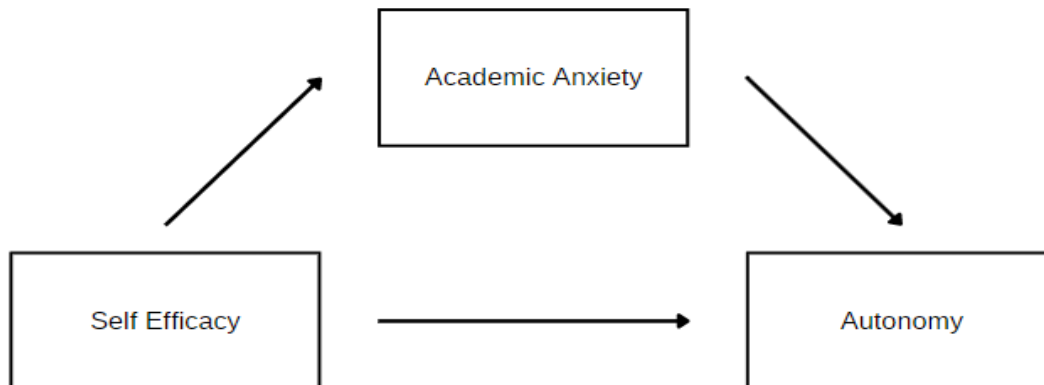


Figure 1: Academic Anxiety mediates the relationship between Self-Efficacy and Autonomy

As per Purwanti *et al.* (2020), Self-Efficacy and Academic Anxiety have an inverse relationship. Students with high Self-Efficacy have low stress levels which then explains why they have low Academic Anxiety. Then, vice versa, a student having a high stress level results in high Academic Anxiety which then means having low Self-Efficacy. Next, based on the study of Kunst *et al.* (2019), if a student has high Academic Anxiety, they have low Autonomy and vice versa. The relationship between these two variables is inverse. Academic Anxiety has a negative impact on Autonomy due to various elements such as fear which then channels negative emotions leading to one not being able to take charge of themselves. Observing the relationships of these variables, it is key to point out that Academic Anxiety always has an effect either on Self-Efficacy or Autonomy, negatively or positively. This is due to Self-Efficacy being an independent variable wherein it depicts the outcome of Academic Anxiety and Autonomy.

Methodology

Research Design

A predictive cross-sectional design is utilized in this study which is designed to determine the connection between academic anxiety and efficacy; academic anxiety and autonomy; and self-efficacy and autonomy. This paper aimed to develop an acknowledgement between the factors presented, which were analyzed and evaluated according to the criteria in terms of a negative, positive, or inverse relationship, to collect results relevant to the possible impact of the relation of academic anxiety, self-efficacy, and autonomy on academic performance.

Participants

Two hundred (200) senior high school students from the Philippines with ages ranging from 15-20 years old, regardless of sex, were the study participants.

Research Tool

Learner Autonomy Questionnaire (LAQ). According to Gholami (2016), this questionnaire comprises 44 statements based on the nine dimensions in language learning. The nine dimensions' elements indicate whether students demonstrate stronger levels of control over a certain area of their learning. Gholami (2016) also stated that this questionnaire is the most comprehensive in terms of the number of the dimensions. However, for this study the researchers reduced the number of statements into 10 items. The survey received a Cronbach's alpha (internal reliability for LAQ) range of 0.784 and for this study the researchers will use the mean of each item of the gathered data for the final score. **General Self-Efficacy Scale (GSE).** The Self-Efficacy scale is a self-report instrument. A 10-item survey with a Cronbach's alpha (internal reliability for GSE) range of 0.76 to 0.90. Correlations exist between the General Self-Efficacy Scale and feelings of optimism and job satisfaction. Anxiety, burnout, stress, concerns about one's health, and depression, negative coefficients were discovered. **Academic Anxiety Scale (AAS).** An eleven 4-point Likert-type items were created to illustrate a range of anxieties and concerns in contexts and settings related to academics. A 11-item survey with a Cronbach's alpha (internal reliability for Academic Anxiety Scale) range of 0.908. "1 = Not at all typical of me," "2 = Somewhat typical of me," "3 = Quite typical of me," and "4 = Very characteristic of me" were the response possibilities. The mean of all responses is used to determine the overall score for the Academic Anxiety Scale ("Not at all typical of me" = 1, "Very typical of me" = 4). This scale is effective at assessing the perceived stressors that university students believe lead to academic anxiety, according to reliability and validity research. (Cassady, Pierson & Starling, 2019)

Data to be Gathered

The standardized instrument used had undergone ethical and regulatory procedures done by the ethics board of De La Salle Medical and Health Science Institute. Before it was submitted to those authorized to examine the research instrument, the researchers also rechecked and ensured that both the instrument and the study conducted would not submit any harm to the Senior High School Students. In addition, the researchers included the participant's rights with regard to answering the research instrument during the data gathering, namely: recognizing the students' willingness to participate in this study, their freedom to withdraw at any point of the conducting of this study if they wish to, contacting necessary and appropriate authorities for other specialized students and in any case that the participant is under legal age, informed assent and parental consent are required. In addition, for vulnerable populations which includes children, the elderly, and those with cognitive or developmental problems it is essential for researchers to guarantee that these rights and the dignity of individuals are protected, and that they are not exploited or put in any danger.

In the context of this study, it was critical to evaluate the possible influence on vulnerable groups' informed permission, since the use of wearable devices and the collecting of personal data may provide distinct issues. As a result, the researchers took extra precautions to ensure that informed permission was gained in an acceptable manner wherein the study would not unfairly burden vulnerable people as damages inflicted upon the ethical consideration towards the students may also affect the reliability of the study.

Result and Discussion

Table 1: Perceived Self-Efficacy, Academic Anxiety and Learner's Autonomy

Domain	Low		Moderate		High	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Self-efficacy	5	2.5	87	43.5	108	54.0
Academic anxiety	35	17.5	91	45.5	74	37.0
Learner's autonomy	1	0.5	35	17.5	164	82.0

Note. *N* = 200.

Based on the derived results from Academic Anxiety Scale, most students (*N*=200), experience Moderate Academic Anxiety (*n*=91; 45.5%) in an academic context. Which means, most students do not always feel High Anxiety, but they also don't necessarily feel no anxiety at all, according to Rith-Najarian et al. (2019), "students are at high risk for— anxiety symptoms and are exposed to multiple stressors unique to this developmental period". However, despite the Moderate Academic Anxiety they feel, based on the obtained statistical data from Learner Autonomy Questionnaire and General Self-Efficacy Scale, most students also experience High Self-Efficacy (*n*=108; 54.0%) and High Learner's Autonomy (*n*=164; 82.0%). Which implies that the majority of students do not have much trouble in their Self-Efficacy mean that they have more belief in themselves, as supported by Hayat et al. (2020), "students who trust in their abilities are more likely to be self-efficacious and try to recognize their academic tasks and plan for their educational affairs.", and most students must have strong self-direction and independence because as stated by Rahman et al.(2022), "Learner Autonomy is influenced by the students' capacity to be autonomous, namely ability, willingness and opportunity." All in all, the prevalence of feeling of Moderate Anxiety among students may be since they are highly vulnerable to it, meaning it is implied that a student is mostly surrounded by definite stressors that feed the feeling of anxiety within them. However, despite this Moderate Anxiety, it can be determined that through most of the student correspondence when it comes to High Self Efficacy and Learner Autonomy, it can be assumed that a student still has the possibility, capacity, and involvement in feeling positive reinforcement within themselves to support their drive academically even with moderate anxiety involved.

Table 2: Correlation between Variables as Perceived by the Respondents

Variable	Correlation Value	<i>p</i>	Interpretation
Self-efficacy – Academic anxiety	-0.376*	<.000	Moderate negative; Significant
Academic anxiety – Learner's autonomy	-0.053	.454	Weak negative; Significant
Self-efficacy – Learner's autonomy	0.502	<.000	Strong positive; Significant

Note. *Significant at .05 level.

The results of the correlation variables as perceived by the students in an interpretation through Pearson-Correlation-Coefficient wherein the data establishes the official relationship between Self-Efficacy and Academic Anxiety, Academic Anxiety and Learner's Autonomy and Self-Efficacy and Learner's Autonomy. The correlation between Self-Efficacy and Academic Anxiety shows (*p*-value: <0.05) with (*r*-value: -0.376), which revealed that there is a Significant Moderate Negative Correlation between the two variables, meaning when Self-Efficacy is High, Academic Anxiety is Low and vice versa. This is further supported by Morales-Rodriguez and Perez-Marmol (2019), who stated that increased levels of anxiety may put the students at risk for lower levels of Self-Efficacy, while those with higher levels of Self-Efficacy will naturally generate lower levels of anxiety. The data shown in the correlation between Academic Anxiety and Learner's Autonomy shows that (*p*-value: >0.05) and (*r*-value: -0.053). With the *p*-value being greater than 0.05, it implies that there is not enough evidence to conclude a Significant Relationship between Academic Anxiety and Learner Autonomy. Lastly, the result of the correlation between Self-Efficacy and Learner's Autonomy is shown to be (*p*-value: <0.05) and (*r*-value: -0.502), which

indicates that there is significant Strong Positive Correlation between the two variables. Where if Self-Efficacy is High, Learner Autonomy is also High, vice versa.

Table 3: Regression Analysis on Academic Anxiety mediating Self-efficacy to Autonomy of the Respondents

Regression Analysis	Coefficient	Std. Error	p
Self-efficacy (X) to Academic anxiety (M)	-0.551*	0.096	<.000
Self-efficacy (X) to Learner's autonomy (Y)	0.618*	0.072	<.000
Academic anxiety (M) to Learner's autonomy (Y)	0.119*	0.049	.017
Sobel Test Results (X-M-Y)	-0.341*	0.071	<.000

Note. *Significant at .05 level.

The results revealed that Self-Efficacy and Academic Anxiety have p-value less than 0.05 level of significance which means that these two factors have Significant Effect on Learner's Autonomy. The Sobel test was used to estimate the statistical significance of indirect effects in mediation analysis. As shown in Table, the resulting p-value is less than 0.05 level of significance which means that the Indirect Effect between Self-Efficacy and Learner's Autonomy via Academic Anxiety is Statistically Significant. The Negative Coefficient on the Sobel test indicates the Negative Indirect effect of Academic Anxiety mediating the Self-Efficacy to Learner's Autonomy. In further, analysis, the lower the Academic Anxiety Level of the students, the Higher Self-Efficacy Level and Learner's Autonomy and vice versa. According to Mensah et.al, (2023), "self-efficacy beliefs insulate students from symptoms of cognitive anxiety. In this case, lower levels of self-efficacy will trigger higher levels of anxiety." And in the same study, it was described that high levels of Self-Efficacy will result to lower levels of Academic Anxiety experienced by a student. With that, Mensah and others supported the statistical data acquired that Self-Efficacy and Academic Anxiety have an inverse relationship. According to Alkan et al. (2019), autonomous learners possess certain characteristics including having high motivation, presence of self-efficacy, sense of effectiveness, determination to learn, positive attitude, the desire for achievement satisfaction. This suggest that an autonomous learner already experience Self-Efficacy. Hence, the two variables having a Direct Relationship because being an autonomous learner involves being capable of managing one's own goals, tasks, and time. Meanwhile, Self-Efficacy involves the belief that one can do his work or task. The interconnectedness of the two variables manifests in an individual who experienced self-efficacy resulting in autonomy. Furthermore, this concludes that Self-Efficacy and Autonomy supports each other within an individual, as experiencing one of them will eventually result in experiencing the other.

Conclusion

The results of this study indicated a significant moderate negative correlation between self-efficacy and academic anxiety. this suggested that as students' self-efficacy increases, their levels of academic anxiety tend to decrease. higher levels of self-efficacy are associated with lower levels of academic anxiety among De La Salle Medical and Health Sciences Institute senior high school students. As students develop a strong sense of self-efficacy, they are more likely to approach challenges with confidence, persist in the face of setbacks, and utilize effective coping strategies. This, in turn, leads to a reduction in academic anxiety and a more positive learning environment. Therefore, as researchers, it can be generalized that fostering self-efficacy beliefs can be an effective strategy to mitigate academic anxiety among senior high school students. Moreover, the findings suggested a weak and insignificant negative correlation between academic anxiety and autonomy. This indicated that academic anxiety does not have a substantial impact on students' sense of autonomy. However, it is important to consider other factors that may influence students' autonomy and further research is needed to explore this relationship more comprehensively. While the lack of a significant correlation may indicate that academic anxiety alone may not directly influence students' autonomy, it is important to recognize that there may be other factors at play. It is crucial to consider these additional factors that may influence students' autonomy and further investigate their

interplay with academic anxiety. Therefore, as researchers, the need for further exploration and research to better understand the factors that influence students' autonomy in the academic setting were acknowledged. The study revealed a significant strong positive correlation between self-efficacy and autonomy. This implied that students with higher levels of self-efficacy are more likely to exhibit higher levels of learner's autonomy; fostering self-efficacy beliefs can contribute to the development of students' autonomy in their learning process. Therefore, as researchers, it can be generalized that fostering self-efficacy beliefs is crucial for promoting students' autonomy in their learning process. The results of this study highlighted the importance of nurturing students' self-efficacy beliefs to enhance their sense of autonomy. When students believe in their capabilities and feel confident in their abilities to succeed academically, they are more likely to take ownership of their learning journey, set goals, and make informed decisions.

Recommendation

Educational institutions should provide programs and interventions that enhance students' self-efficacy. This can be done through workshops, mentoring programs, and individualized support to help students develop confidence in their abilities. through guided discussions and exercises, students can explore their strengths, past successes, and strategies they can utilize to overcome challenges. Workshops can address common barriers to self-efficacy and provide strategies to overcome them. By actively engaging students in these workshops, educational institutions can empower them to develop a strong belief in their abilities, leading to reduced academic anxiety and increased confidence in their academic pursuits. Schools should implement strategies to reduce academic anxiety among students. This can include providing guidance on effective study habits, offering stress management workshops, and creating a supportive network of peers and mentors. schools can strategically partner up with organizations outside and inside their premises as well as the country to provide symposiums, seminars, and talks. They can also use this network to improve their curriculums.

Further research should be conducted to explore additional factors that may influence academic anxiety and learner's autonomy, as well as the long-term effects of interventions targeting self-efficacy and academic anxiety. Explore deeper into aspects in this research such as closely interviewing and getting to know specifically how academic anxiety influences self-efficacy and autonomy through a thorough interview. In addition, future researchers are encouraged to explore different demographics and nature of the participants as well as exploring different applicable factors. By implementing these recommendations, educational institutions can better support senior high school students in developing their self-efficacy, reducing academic anxiety, and fostering learner's autonomy, ultimately enhancing their overall academic experience and success.

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