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STUDENTS' COPING STRATEGIES IN DEALING MATHEMATICAL ANXIETY AND THEIR PERFORMANCE IN MATHEMATICS

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ABSTRACT

This study focuses on the effects of coping strategies to the mathematical anxiety and students' mathematics performance. This study aims to assess the level of their coping strategies, their mathematical anxiety and their performance based on grades. Also, the study seeks to determine if the coping strategies significantly affect their mathematical anxiety and performance.

The descriptive method is used in gathering the data since this research focused in describing the effects of coping strategies to the mathematical anxiety and Mathematics performance. Random sampling techniques were used to select the 316 Grade 11 Senior High School students of ACTS Computer College from different strands. The main instrument used in this research study is a researcher-made questionnaire about the coping strategies and mathematical anxiety.

There is a high level of coping strategies among Grade 11 students of ACTS Computer College Moreover, there is also a high level of mathematical anxiety among them. As to students' mathematics grade, majority of them were advanced. Overall, the identified significant effects of the coping strategies such as creating a supportive environment, setting realistic goals, time management and relaxation techniques can lessen the mathematical anxiety of the students in terms of learning, self-concept and test anxieties. Lastly, among the coping strategies, only setting realistic goals can improve the Mathematics performance of Grade 11 students.

Based on the gathered data, it is concluded that the coping strategies such as creating supportive environment, setting realistic goals and time management significantly affect the learning anxiety of Grade 11 students while time management and relaxation techniques have significant effect to self-concept anxiety and only relaxation techniques have significant effect to test anxiety. It implies that coping strategies significantly affect the mathematical anxiety of the students. Thus, the first null hypothesis is rejected. Lastly, coping strategies do not significantly affect the Mathematics performance of selected Grade 11 students of ACTS Computer College except setting realistic goals. It gives way to accept the other null hypothesis.

Based on the findings and conclusions drawn, teachers are suggested to set realistic goal for every lesson so that the learners can attain the target goals in order for them to lessen their mathematical anxiety. Since mathematical anxieties are often experience by the learners especially in this post-pandemic era, school administrators should conduct seminars and workshops for the students and invite professionals who can lessen their fears. Also, it can help them to properly use coping strategies in dealing their anxiety.

KEYWORDS: *coping strategies; mathematical anxiety; mathematics performance*

1. INTRODUCTION

In layman's term, mathematical anxiety is characterized by fear, tense or negative feelings whenever a person faces Mathematics such as solving worded-problems, manipulating arithmetic or geometric sequences or encountering logical or evaluative situations with relation in the said field. It is a common challenge with various groups regardless of gender, age or background. From being a child up to being an adult, there are times that a person will feel this type of anxiety. From some people, the thought of numbers or equation provides an unease feeling or emotion and stress. According to Yang (2014), people who feel tension, nervousness, and fear of situations concerning math might have anxiety in the subject.

Aside from workplace, the effects of mathematical anxiety can extend into everyday life scenario and whenever math skills are required. From counting, managing personal finances up to decision-making that need math concepts, the presence of Mathematics can be a hindrance for a person to perform and make tasks confidently. Likewise, having this anxiety can contribute to a person to have a lower self-esteem that can lead to underachievement. Furthermore, one of the biggest effects of mathematical anxiety can be found inside the classroom situations. Having this type of feeling can lead the students to avoid subjects that have Mathematics integration and if that happens, it can result to academic failure. According to Nelson (2016), more students think negatively of how they cope to their problems because most of them are getting struggles in solving problems in mathematics. Moreover, student may not study, listen to the teacher and cooperate to the class, will probably fail.

Though for some people, mathematical anxiety is just a state of mind, its impacts can be significant since it can impede one's ability to show their full potential and causing stress. As a matter of fact, Philippines had one of the lowest scores in Programme for International Student Assessment (2022) with a rank of 353rd. However, the impacts of mathematical anxiety

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can be lessened in many ways. There are coping strategies that can help people to mitigate its effects. For instance, some students used strategies aimed at achieving in learning Mathematics by help seeking, trying to understand the study material and finding solutions to the problems and they are working with others.

With those being said, the researcher came up with a study that focuses on the students' coping strategies in dealing mathematical anxiety. The purpose of the study was to determine if the coping strategies used by the students significantly affect their mathematical anxiety. Also, the researcher wanted to test if those coping strategies have impacts on the Mathematics performance of the students.

1.1 Statement of the Problem

Specifically, the study sought answers to the following questions:

1. What is the level of students' coping strategies in terms of;
   - 1.1. Positive Self-Talk;
   - 1.2. Creating Supportive Environment;
   - 1.3. Setting Realistic Goals;
   - 1.4. Time Management; and
   - 1.5. Relaxation Techniques?
2. What is the level of students' mathematical anxiety in terms of:
   - 2.1. Test Anxiety;
   - 2.2. Learning Anxiety;
   - 2.3. Performance Anxiety; and
   - 2.4. Self-Concept Anxiety?
3. What is the students' performance in mathematics in terms of grades?
4. Are the students' coping strategies significantly affect their mathematical anxiety of students?
5. Are the students' coping strategies significantly affect their performance in mathematics?

2. METHODOLOGY

The research design used in the study was descriptive research, a quantitative approach, as it aims to accurately describes the effects of coping strategies in dealing mathematical anxiety and mathematics performance. According to McCombes (2022), it answers what, where, when, and how, but not why. Furthermore,

3. RESULTS AND DISCUSSION

This chapter presents the data gathered from the responses of selected Grade 11 students of ACTS Computer College. The statistical analysis of the data and the corresponding interpretation and discussion of findings are based on the order of the statement of the problem.

Students' Coping Strategies

This study sought to determine the level of coping strategies used by the selected Grade 11 students of ACTS Computer College. Additionally, this research determined if these variables have direct impact to the students' mathematical anxieties. Moreover, he sought to know if these coping strategies have effects on their mathematics performance.

The level students' coping strategies were revealed in the following tables which showed the statements, mean, standard deviation, remarks and verbal interpretation.
Table 1 shows the level of students' coping strategies in terms of positive self-talk.

Table 1 ***Level of Students' Coping Strategies in terms of Positive Self-Talk***

I…	MEAN	SD	REMARKS
…prioritize focusing on the present circumstances and events, rather than my personal emotions or feelings.	3.06	0.52	Agree
…always tell myself that I am going to be alright when academic problems hit me.	3.10	0.64	Agree
…focus on the things that I have to do so that it can help me in achieving academic success.	3.24	0.65	Agree
…take one step at a time in dealing problems related to my grade or score in Mathematics and other subjects.	3.09	0.54	Agree
…handle difficult task to make it easier next time.	3.04	0.67	Agree
Weighted Mean		3.11	
SD		0.60	
Verbal Interpretation		High	

Table 1 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Positive Self-Talk. The statements, mean, standard deviation and remarks are also presented.

The statement ``*I focus on the things that I have to do so that it can help me in achieving academic success''* got the highest weighted mean (M=3.24, SD=0.65) while the statement ''*I handle difficult task to make it easier next time''* got the lowest weighted mean (M=3.04, SD=0.67).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Positive Self-Talk gained a weighted mean score of 3.11 and a standard deviation of 0.60 and was verbally interpreted as *high* among the respondents.
In summation, students highly used positive self-talk whenever feel anxiety, worries or fear. In this study, the mentioned coping strategy is a usual mechanism that learners are using in order

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not to feel the anxieties in mathematics.

Table 2 shows the level of students' coping strategies in terms of creating supportive environment.

Table 2 ***Level of Students' Coping Strategies in terms of Creating Supportive Environment***

I…	MEAN	SD	REMARKS
…see the classroom as a place where I can be myself and express my ideas without judgment.	2.84	0.69	Agree
…know that I am valued and respected, regardless of my ability, gender, sexuality, race, ethnicity, or religion.	3.15	0.52	Agree
…am challenged to achieve high expectations as well as I receive the support necessary to meet those expectations.	3.06	0.58	Agree
…have standards of behavior that are established and are consistently and equitably enforced for all.	3.06	0.53	Agree
…have teachers who get to know all students and uses that knowledge to create meaningful experiences.	3.33	0.56	Strongly Agree
Weighted Mean		3.09	
SD		0.60	
Verbal Interpretation		High	

Table 2 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Creating Supportive Environment. The statements, mean, standard deviation and remarks are also presented.

The statement ``*I have teachers who get to know all students and uses that knowledge to create meaningful experiences.''* got the highest weighted mean (M=3.33, SD=0.56) while the statement ''*I see the classroom as a place where I can be myself and express my ideas without judgment.''* got the lowest weighted mean (M=2.84, SD=0.69).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Creating Supportive Environment gained a weighted mean score of 3.09 and a standard deviation of 0.60 and was verbally interpreted as *high* among the respondents.

In summation, supportive environment was observed on the respondents to cope up whenever they feel anxiety or encounter problems in Mathematics. It implies that teachers should be the first person who should create a supportive environment. If there is an environment in which the learners feel that they are accepted, it can motivate them to learn more and better. Additionally, a supportive environment is a place that is conducive for learning.

Moreover, table 3 shows the level of students' coping strategies in terms of setting realistic goals.

Table 3 ***Level of Students' Coping Strategies in terms of Setting Realistic Goals***

I…	MEAN	SD	REMARKS
…set short-term goals for myself like finishing all my homework or reflective exercise.	3.10	0.49	Agree
…imagine what life would be like when I reach my goal.	3.39	0.58	Strongly Agree
…have goals that are based on my own interests and plans for the future.	3.37	0.61	Strongly Agree
…think about barriers that might get in my way when I set goals.	3.14	0.55	Agree
…consider my past successes and failures when setting a goal	3.21	0.57	Agree
Weighted Mean		3.24	
SD		0.57	
Verbal Interpretation		High	

Table 3 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Setting Realistic Goals. The statements, mean, standard deviation and remarks are also presented.

The statement ``*I imagine what life would be like when I reach my goal.''* obtained the highest weighted mean (M=3.39, SD=0.58) while the statement ''*I set short-term goals for myself like finishing all my homework or reflective exercise.''* got the lowest weighted mean (M=3.10, SD=0.49).

The level of coping strategies of selected Grade 11 students of

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ACTS Computer College in terms of Setting Realistic Goals gained a weighted mean score of 3.24 and a standard deviation of 0.57 and was verbally interpreted as *high* among the respondents.

In summation, learners set realistic goals just to cope up with their anxiety or when they encounter problems in Mathematics. It implies that when a learner set goals that are achievable or attainable, there is a high chance that his or her anxiety can be lessen.

Table 4 shows the level of students' coping strategies in terms of time management.

Table 4 ***Level of Coping Strategies in terms of Time Management***

I…	MEAN	SD	REMARKS
…make a list of tasks to that I need accomplish each day so that I can easily finish those tasks.	2.90	0.62	Agree
…prioritize the tasks I have to do according to their importance and urgency.	3.16	0.52	Agree
…have some time during each day when I can work uninterrupted.	2.98	0.60	Agree
…do the most important tasks at my best time during the day and when I have free time.	3.17	0.57	Agree
…prepare time blocking so that I can avoid procrastination.	2.88	0.59	Agree
Weighted Mean		3.02	
SD		0.59	
Verbal Interpretation		High	

Table 4 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Time Management. The statements, mean, standard deviation and remarks are also presented.

The statement ``*I do the most important tasks at my best time during the day and when I have free time.''* got the highest weighted mean (M=3.17, SD=0.57) while the statement ''*I prepare time blocking so that I can avoid procrastination.''* got the lowest weighted mean (M=2.88, SD=0.59).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Time Management gained a weighted mean score of 3.02 and a standard deviation of 0.59 and was verbally interpreted as *high* among the respondents.

In summation, time management is one of the coping strategies used by the respondents just to deal with their anxiety or when they encounter problems in Mathematics.

Table 5 shows the level of students' coping strategies in terms of relaxation techniques.

Table 5 ***Level of Coping Strategies in terms of Relaxation Techniques***

I…	MEAN	SD	REMARKS
…in hale peace and exhale worry so I can free up my mind.	3.20	0.59	Agree
…always get enough sleep for me to relax after a long day.	2.67	0.81	Agree
…listen to music whenever I feel stress so that I can feel relief.	3.39	0.61	Strongly Agree
…spend my time outside when I find myself in a difficult situation,	2.89	0.83	Agree
…exercise regularly because it is one of my relaxation techniques.	2.68	0.77	Agree
Weighted Mean		2.97	
SD		0.78	
Verbal Interpretation		High	

Table 5 illustrates the level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Relaxation Techniques. The statements, mean, standard deviation and remarks are also presented.

The statement ``*I listen to music whenever I feel stress so that I can feel relief.''* obtained the highest weighted mean (M=3.39, SD=0.61) while the statement ''*I always get enough sleep for me to relax after a long day.''* got the lowest weighted mean (M=2.67, SD=0.81).

The level of coping strategies of selected Grade 11 students of ACTS Computer College in terms of Relaxation Techniques gained a weighted mean score of 2.97 and a standard deviation of 0.78 and was verbally interpreted as *high* among the respondents.

In summation, respondents are using their own relaxation technique as one of the coping strategies to deal with their anxiety or when they encounter problems in Mathematics. It implies that their anxiety especially in mathematics can be lessen using relaxation technique.

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Level of Students' Mathematical Anxiety

The level students' mathematical anxiety was revealed in the following tables which showed the statements, mean, standard deviation, remarks and verbal interpretation.

Moreover, table 6 shows the level of students' mathematical anxiety in terms of test anxiety.

Table 6 ***Level of Mathematical Anxiety in Terms of Test Anxiety***

I…	MEAN	SD	REMARKS
…have visible signs of nervousness such as sweaty palms, shaky hands right before a test.	3.00	0.80	Often
…do not know any of the answers whenever I skim or read through the given test.	2.61	0.74	Often
…have trouble sleeping the night before a test, quiz or examination because I am overthinking if I can pass it.	2.94	0.83	Often
…make mistakes on easy questions or put answers in the wrong places.	3.09	0.68	Often
…literally feel nauseated before a test because of its content I cannot answer.	2.82	0.72	Often
Weighted Mean		2.89	
SD		0.77	
Verbal Interpretation		High	

Table 6 illustrates the level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Test Anxiety. The statements, mean, standard deviation and remarks are also presented.

The statement ``*I make mistakes on easy questions or put answers in the wrong places.''* obtained the highest weighted mean (M=3.09, SD=0.68) while the statement '*do not know any of the answers whenever I skim or read through the given test.''* got the lowest weighted mean (M=2.61, SD=0.74).

The level of mathematical anxiety of selected grade 11 students of ACTS Computer College in terms of Test Anxiety gained a weighted mean score of 2.89 and a standard deviation of 0.77 and was verbally interpreted as *high* among the respondents.

It implies that the respondents often experience mathematical anxiety especially during examination or quizzes that made them feel test anxiety.

Table 7 shows the level of students' mathematical anxiety in terms of learning anxiety.

Table 7 ***Level of Mathematical Anxiety in terms of Learning Anxiety***

I…	MEAN	SD	REMARKS
…feel worry at the work assigned by the instructor due to the less time period.	3.06	0.53	Often
…have fear when the teacher gives too little time to present my mathematical work.	3.03	0.66	Often
…experience uneasiness when the teachers simultaneously dictate several subjects and is similarly due to date.	3.03	0.58	Often
…feel nervous when my teacher introduces some teacher-taught applications because I have never used these before.	2.90	0.64	Often
…have worries in the field of understanding of the content of Mathematics.	2.93	0.71	Often
Weighted Mean		2.99	
SD		0.63	
Verbal Interpretation		High	

Table 7 illustrates the level of mathematical anxiety of selected grade 11 students of ACTS Computer College in terms of Learning Anxiety. The statements, mean, standard deviation and remarks are also presented.

The statement ''*I feel worry at the work assigned by the instructor due to the less time period.''* obtained the highest weighted mean (M=3.06, SD=0.53) while the statement ''*I feel nervous when my teacher introduces some teacher-taught applications because I have never used these before.''* got the lowest weighted mean (M=2.90, SD=0.64).

The level of mathematical anxiety of selected grade 11 students of ACTS Computer College in terms of Learning Anxiety gained a weighted mean score of 2.99 and a standard deviation of 0.63 and was verbally interpreted as *high* among the respondents.

It implies that the respondents often experience anxiety in learning Mathematics. The data also revealed that the participants believed they would benefit from accommodations provided by professionals who understand the detrimental impact of this type of anxiety.

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Table 8 shows the level of students' mathematical anxiety in terms of performance anxiety.

Table 8 ***Level of Mathematical Anxiety in Terms of Performance Anxiety***

I…	MEAN	SD	REMARKS
…feel nervous whenever my teacher calls me for recitation.	3.07	0.76	Often
…sense butterflies in my stomach when I am solving math problems in front of the class.	2.90	0.76	Often
…feel my hands shaking when my teacher calls me to answer his/her Mathematics questions.	2.90	0.80	Often
…think that something went wrong when answering Mathematical questions in front.	2.95	0.75	Often
…am scared if my teacher calls me to answer without looking at my notes. .	2.95	0.77	Often
Weighted Mean		2.95	
SD		0.77	
Verbal Interpretation		High	

Table 8 illustrates the level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Performance Anxiety. The statements, mean, standard deviation and remarks are also presented.

The statement ‘*’I feel nervous whenever my teacher calls me for recitation.’’* obtained the highest weighted mean (M=3.07, SD=0.76) while the statements ‘’*I sense butterflies in my stomach when I am solving math problems in front of the class.’’ and ‘’I feel my hands shaking when my teacher calls me to answer his/her Mathematics questions.’’* got the lowest weighted mean (M=2.90, SD=0.76) and (M=2.90, SD=0.80) respectively.

The level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Performance Anxiety gained a weighted mean score of 2.95 and a standard deviation of 0.77 and was verbally interpreted as *high* among the respondents.

In summation, the respondents often experience mathematical anxiety whenever they need to perform Mathematics in front of the class or in front of others.

Table 9 shows the level of students' mathematical anxiety in terms of self-concept anxiety.

Table 9 ***Level of Mathematical Anxiety in Terms of Self-Concept Anxiety***

I…	MEAN	SD	REMARKS
…feel different from most mathematics inclined people and wish I was more like them.	3.07	0.70	Often
…have trouble taking criticisms about mathematical ability from other people.	2.86	0.71	Often
…believe that I can do anything that is related to Mathematics because I trust myself.	2.80	0.80	Often
…rather believe on the answers of my classmates in Math than mine.	2.61	0.84	Often
…feel unworthy when I commit mistakes in my quizzes, activities and seat works.	3.03	0.79	Often
Weighted Mean		2.87	
SD		0.79	
Verbal Interpretation		High	

Table 9 illustrates the level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Self-Concept Anxiety. The statements, mean, standard deviation and remarks are also presented.

The statement ‘*feel different from most mathematics inclined people and wish I was more like them.’’* obtained the highest weighted mean (M=3.07, SD=0.70) while the statements ‘’*I rather believe on the answers of my classmates in Math than mine.’’* got the lowest weighted mean (M=2.61, SD=0.84).

The level of mathematical anxiety of selected Grade 11 students of ACTS Computer College in terms of Self-Concept Anxiety gained a weighted mean score of 2.87 and a standard deviation of 0.79 and was verbally interpreted as *high* among the respondents.

In summation, the respondents often experience mathematical anxiety because of what they feel or perceive on their own abilities.

Students' Mathematics Performance

Mathematics performance refers to the ability of the learners to solve worded problems and perform mathematical equations. Also, it is about the literacy of someone to compute, analyze and interpret mathematical scenarios that can be used in real-life.

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Furthermore, the students' mathematics performance was revealed in the following table which showed the score, frequency, percentage, descriptive value, mean, standard deviation and verbal interpretation.

Moreover, table 10 shows the students' mathematics performance

Table 10 ***Students' Mathematics Performance in Terms of Grades***

Score	Frequency	Percentage	Descriptive Value
90-100	157	49.7%	Advance
85-89	80	25.3%	Proficient
80-84	69	21.8%	Approaching Proficiency
75-79	10	3.2%	Developing
Below 75	0	0.0%	Beginning
	n=316	**100%**	
Mean			**88.81**
SD			**5.56**
Interpretation			**Proficient**

Table 10 shows Mathematics Performance of selected Grade 11 students of ACTS Computer College in terms of Grade.

It indicates that 157 Grade 11 respondents obtained a grade of 90-100 which is equivalent to 49.7% that can be described as *Advanced*. Moreover, 80 of the Grade 11 students have grades of 85-89 or 25.3% which can be interpreted as *Proficient*. However, 69 or 21.8% of the respondents got a grade of 80-84 which can be described as *Approaching Proficiency*. Lasty, 10 or 3.2% of the respondents have grades of 75-79 that has a descriptive value of *Developing*.

The mean grade in Mathematics of the selected Grade 11 students of ACTS Computer College is 88.81 which can be described as *Proficient*.

It implies that the Grade 11 students of ACTS Computer College are *Proficient* when it comes to their grades in General Mathematics.

Significant Effect of Students' Coping Strategies in Mathematical Anxiety

The significant effect of coping strategies such as Positive Self-Talk, Creating Supportive Environment, Setting Realistic Goals, Time Management, Relaxation Techniques on mathematical anxiety in terms of Test Anxiety, Learning Anxiety, Performance Anxiety and Self-Concept Anxiety of students was revealed in the following table.

The significant effect of students' coping strategies in mathematical anxiety shows the coping strategies, mathematical anxiety, t-value and p-value.

Table 11 ***Students' Coping Strategies on Mathematical Anxiety***

Coping Strategies	Mathematical Anxiety	*t-value*	*p-value*
Positive Self-Talk	Test Anxiety	1.45	0.148
	Learning Anxiety	0.35	0.725
	Performance Anxiety	1.41	0.160
	Self-Concept Anxiety	0.56	0.576
Creating Supportive Environment	Test Anxiety	0.04	0.966
	Learning Anxiety	1.75	0.028*
	Performance Anxiety	0.63	0.528
	Self-Concept Anxiety	1.77	0.077
Setting Realistic Goals	Test Anxiety	1.08	0.281
	Learning Anxiety	2.62	0.009*
	Performance Anxiety	0.82	0.413
	Self-Concept Anxiety	1.87	0.063
Time Management	Test Anxiety	0.38	0.706
	Learning Anxiety	2.05	0.041*
	Performance Anxiety	0.53	0.595
	Self-Concept Anxiety	2.40	0.017*
Relaxation Techniques	Test Anxiety	2.97	0.003*
	Learning Anxiety	1.07	0.286
	Performance Anxiety	0.02	0.987
	Self-Concept Anxiety	2.80	0.005*

*Note: * p < .05.*

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Table 11 shows the results of the statistical analysis of the significant effect of the coping strategies used by the selected Grade 11 students of ACTS Computer College to the mathematical anxiety.

The coping strategies such as creating supportive environment, setting realistic goals and time management, all show a statistically significant positive effect on learning anxiety of the students (p = 0.028; 0.009; 041). Besides, the coping strategies such as time management and relaxation techniques, all show a statistically significant effect on students' self-concept anxiety (p = 0.017; 0.005). Lastly, the coping strategy relaxation techniques shows a statistically significant effect on test anxiety of the students (p = 0.003).

This implies that these coping strategies led to a significant effect of students' anxiety towards learning Mathematics. Moreover, time management and relaxation techniques have positive effects or can lessen the self-concept anxiety of Grade 11 students about their abilities in Mathematics. Lastly, relaxation techniques can lessen the test anxiety of Grade 11 students in terms of Mathematics.

To conclude, the identified significant effects of the coping strategies such as creating a supportive environment, setting realistic goals, time management and relaxation techniques can lessen the mathematical anxiety of the students in terms of learning, self-concept and test anxieties.

Significant Effect of Students' Coping Strategies in Mathematics Performance

To test the significant effect of students' coping strategies such as Positive Self-Talk, Creating Supportive Environment, Setting Realistic Goals, Time Management, Relaxation Techniques on the performance of Grade 11 students in Mathematics, data were treated statistically using Minitab 14 using Regression Analysis and with a margin of error of 0.05

The significant effect of students' coping strategies in mathematical anxiety was revealed in the following table which shows the coping strategies, students' mathematics performance, t-value and p-value.

Table 12 ***Coping Strategies in the Students' Mathematical Performance in Terms of Grades***

Coping Strategies	**Students' Performance**	***t-value***	***p-value***
Positive Self-talk	Grade	1.12	0.264
Creating Supportive Environment		1.46	0.144
Setting Realistic Goals		2.28	0.023*
Time Management		1.10	0.271
Relaxation Techniques		1.14	0.257

*Note: * p < .05.*

Table 12 illustrates the results of the statistical analysis of the significant effect of the coping strategies used by the selected Grade 11 students of ACTS Computer College to their performance in Mathematics.

The coping strategy setting realistic goals shows a statistically significant positive effect on the mathematics performance of the students in terms of grade (p = 0.023). This implies that this coping strategy led to a positive significant effect on the grades of Grade 11 students in Mathematics.

To conclude, the identified significant effects of the coping strategy setting realistic goals can improve the Mathematics performance of Grade 11 students.

It implies that coping strategies do not only help to lessen the anxieties of people including mathematical anxiety. It can also improve the mathematics performance of the students. Though the other coping strategies do not significantly affect the grade of the learners, it was showed that setting a realistic goal can enhance the grades of the students that are reflections of their mathematics performance.

4. CONCLUSION AND RECOMMENDATIONS

Based on the findings, it can be concluded that:

Coping strategies such as creating supportive environment, setting realistic goals and time management significantly affect the learning anxiety of Grade 11 students while time management and relaxation techniques have significant effect to self-concept anxiety and only relaxation techniques have significant effect to test anxiety. Therefore, the null hypothesis was rejected. With that, it was concluded that the coping strategies can be used in dealing with Mathematical anxiety.

Coping strategies do not significantly affect the Mathematics performance of selected Grade 11 students of ACTS Computer College except setting realistic goals. Therefore, the null hypothesis was accepted. It implies that coping strategies cannot enhance the Mathematics performance of the learners.

Based on the findings and conclusions drawn, the following are recommended:

1. Teachers and parents are suggested to create supportive environment by encouraging the students to participate more in the class discussion and proper appraisal to the students must be observed. Also, they should set realistic goal for every lesson so that the learners can attain the target goals in order for them to lessen the anxiety that they are experiencing in the subject. Lastly, they should help the learners to prepare a time plan and guide their learners regularly about the learners' improvement.
2. Future researchers should classify the anxieties of the learners and emphasize the coping strategies they are using in order to determine the specific coping mechanism that lessen their anxiety.

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3. Since mathematical anxieties are often experience by the learners especially in this post-pandemic era, educators and school administrators should conduct seminars and workshops for the students and by inviting professionals that will lessen their fears. Also, it can help them to properly use coping strategies in dealing their anxieties.

REFERENCE

1. *Nelson, C.S. (2016). "Consent to Participant in a Research Study, "A Mater Thesis to Misouri State University: College of Natural and Applied Sciences, pp.11-62, July 2016.*
2. *McCombes, S. (2019). Research Design: Types, Methods, and Examples. Scribbr*