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## Math's Anxiety: Classroom Culture as a Causing Factor

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### Abstract

The aim of this study is to find out the basis of math's anxiety: classroom culture as a causing factor. A quantitative research strategy based on the positivist paradigm was used. The main objective of this study was to identify the causes of math's anxiety over the classroom circumstances. A random sample of 190 respondents in the tenth grade—95 boys and 95 girls—was chosen from among the students enrolled in the 19 community schools in the Kathmandu district. A self-made questionnaire with 35 statements and five-point Likert-type response options were used to collect data. Expert feedback was used to confirm the validity of the self-developed questionnaire, and reliability was determined using Cronbach's alpha, which found out to be 0.82 using Delphi methodology. In accordance with the loading components, I had all four components prepared. It was concluded that, overcrowded classroom, attitude towards mathematics, pessimistic past experience and comparative culture are the main causing factors of math's anxiety.

*Keywords:* anxiety, classroom, culture, causing factor, strategy

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### Introduction

Today's students as well as teachers are dealing with a serious issue with math anxiety. In the context of mathematics learning, anxiety has been defined as stress that prevents one from manipulating facts from solving problems in mathematics in a range of real-world and academic contexts (Rosnan, 2006). It is extremely important for math teachers to comprehend the origins, impacts, and strategies for

assisting students in overcoming math anxiety (Estonanto, & Dio, 2019). Math anxiety can manifest in a variety of ways, such as a reluctance to try solving mathematical problems, a fear of speaking up in advanced math classes, and particularly high levels of anxiety in the classroom (Jameel, & Ali, 2016). Additionally, mathematics anxiety affects students' working memory and manifests itself differently in different socio background students at different ages for various causes (Carreon, & Dumapit, 2021). Consequently, Mehmet and Hulya (2021) highlight that a teacher's attitude can contribute to mathematics anxiety. Research indicates that students have a propensity to absorb their teachers' passion and excitement in teaching mathematics (Jackson and Leffingwell, 1999). It is highly probable that students will have a negative attitude towards mathematics if their teacher does. Nonetheless, there are a number of actions a teacher may take to help students feel less anxious about math, such as going over fundamental concepts, ensuring that they grasp the mathematical language, and offering them a support system (Colomeischi, & Colomeischi, 2015). A teacher can better prevent math anxiety in students and assist them in overcoming it if they have a deeper understanding of the subject. As a result, Zakaria (2018) believes that children who experience greater mathematics anxiety should perform worse academically.

Mathematics anxiety is a problem for many students especially in secondary level. From basic to higher school students, it can have negative consequences that include stress, anxiety, and feelings of tense anticipation of rejection (Truttschel, 2002). Based on Perry's (2004) findings, a math student's nervousness and insecurity can significantly impair their performance, much like an inexperienced player hitting their first shot. According to Kiarsi and Ebrahimi (2021), the majority of math teachers believe that students feelings of inadequacy and fear of failure are the main causes of mathematics anxiety. Most of the time, math anxiety is not severe or overpowering, yet it nonetheless plagues most students during their time studying the subject (Carreon & Dumapit, 2021). As a result of their past interactions with math teachers and their friends, students frequently exhibit significant levels of anxiety, fear, or discomfort when it comes to mathematics (Shishigu, 2018). Pls write your reflection in relation to students' anxiety here.

A student's past bad mathematics learning experiences, whether at home or in the classroom, may also contribute to the development of mathematics anxiety (Rossnan, 2006). In this situation Anigbo (2016) opines that large and overcrowded classroom contributes to poor performance in mathematics. Similarly, negative experiences of the teachers are also caused of anxiety, lack of interest in learning mathematics, and comparative culture may hinder high achievement in mathematics. Likewise, students themselves, teachers, class size, teaching strategies, teaching learning

attitude, experiences and peer comparison are all independent variables either singly or combine relate math's anxiety (Anigbo 2016). Teachers and other members of the public have long been concerned about mathematics anxiety. In this twenty-first century, it is increasingly important to have a solid understanding of mathematics. As shown by Carrera and Dumapit (2021) teachers can significantly mitigate student's anxiety related to mathematics.

Students who experience anxiety often feel as though their hearts are racing, think they are incapable of solving mathematical problems, or decide not to enroll in math classes (Sheffield & Hunt, 2006). Furthermore, Estonanto and Dio (2019) feel that teachers and other stakeholders should be concerned about students' anxiety when it comes to mathematics since they believe that a high level of anxiety is linked to a dread of the subject. As a result of mathematics' current prominence in the curriculum, students must acquire the fundamentals of the subject in order to perform well in daily life (Garba, Ismail, Osman, & Rameli, 2020). Many scholars support creative approaches to mathematics education that inspire students' interest in the subject by connecting concepts to practical applications (Hemmings, Grootenboer & Kay, 2011). Therefore, efficient teaching pedagogy must be used in the classroom along with environment management in order to satisfy students' demands and satisfaction of their desire for mathematics.

Mathematics is the core subject at school level curriculum in Nepal, every student has to face mathematics from the very beginning level to their study. Though teacher teaches mathematics in equal manner in the classroom but students do not have equal attitude and knowledge towards the mathematics. As a result students may feel psychological, an academic tension due to cause of mathematics. Knowledge of mathematics is used to understand not only mathematics, it is also used in physics, chemistry and engineering (Hembree, 1990). Research shows a decline in student's motivation towards mathematics courses (Kiarsi, & Ebrahimi, 2021). Mathematics anxiety can be described as tension and anxiety-producing sensations that obstruct one's ability to manipulate figures and solve problems in mathematics in a range of social and academic contexts (Mollah, 2017). In this context, Rossnan (2006) has a similar opinion, arguing that a student's previous bad experiences with mathematics instruction—whether at home or in the classroom—lead to the development of mathematical anxiety. According to Shishigu (2018) mathematics anxiety is psychological factors that hinder students learning of mathematics. He also added math anxiety as the negative emotions that interfere with the solving of mathematical problems and disturbance during the process of learning mathematics. Consequently, Luttenberger, Wimmer, and Paechter (2018) highlight that math anxiety occurs form

the students prior negative experience, parents role or home environment, teachers role and teaching strategies consequently.

Mathematics anxiety does not occur in overnight. Poor test scores, uncomfortable classroom experiences, a lack of motivation to finish challenging assignments, and a negative attitude toward math instruction among parents and even teachers are all factors that contribute to mathematics anxiety (Mollah, 2017). Previous studies show that individuals may experience different effects from mathematics anxiety, including cognitive, affective, and bodily reactions (Whyte & Anthony, 2012). An increase in heart rate, tension, or feeling sick are examples of a physical reaction. Negative self-talk, missing out, and avoidance are examples of cognitive reactions. Mistrust of one's own abilities, fear of appearing foolish, and loss of self-esteem are examples of affective reactions (Freiberg, 2005, as cited in Whyte & Anthony, 2012). According to Luttenberger, Wimmer, and Paechter (2018), math anxiety can also show itself as emotional, cognitive, or physical symptoms that can impair one's performance. Math anxiety affects students' daily lives, their academic careers, and even their stress levels, which are known to lead to a host of additional issues (Shishigu, 2018). As a result, we can conclude that math anxiety affects students all throughout the world, not just students in Nepal. This study's primary goal is to ascertain the amount of math anxiety among secondary school students. Furthermore, we might begin this type of research by focusing on the question, "What are the causes of math anxiety over classroom learning?"

### **Changing Image for the Students' Anxiety**

Changing image of mathematics aims to improve mathematical thinking and learning. "Cognitive and affective beliefs are investigated in order to identify the "fixings" which equip students better for solving mathematical task, making teacher capable of teaching differently or more effectively" (Jankvist, 2015, p. 41). He further said studies are conducted on how to change already existing beliefs into the more favorable ones. Additionally, Mutodi and Ngirande (2014) say that mathematics anxiety affects student's achievement towards mathematics. In this context, maths anxiety is an emotional rather than intellectual problem. Moreover, Jankvist (2015) argues what is knowledge for one individual may be beliefs for another individual. Moving image of mathematics is an active process, so mathematics anxiety is caused classroom context (Makari, 2012). Personal images of mathematics are personal representation of mathematics whereas social images of mathematics is represented and encompassing classroom, learning experiences of teacher, students and parents (Ernest, 2008). In addition, Makari (2012) also emphasizes the idea that the philosophy

of mathematics instruction in the classroom determines how mathematics is perceived to change. To reduce mathematics anxiety, mathematics must be seen with positivity. Nonetheless, lessons are taught in class in a variety of ways to suit the various learning styles of the students.

Philosophy of mathematics ranges of perspectives which may be termed absolutist and fallibilist. Absolutist view of philosophy suggests that mathematics as rigid, fixed, logical, absolute, inhuman, cold, objective, pure, abstract, remote and ultra-rational (Ernest, 1991). Linking with these view, Garba, Ismail, Osman and Rameli (2020) view that mathematics anxiety has joined the negative attitudes towards mathematics. The philosophy of mathematics, with its twentieth-century fixation on epistemic foundationalism, is at least partially to fault for this unfavorable reputation, which helps to explain worry (Ernest, 1991). In recent times, however, a fresh wave of fallibility philosophies in mathematics has gained traction, challenging the notion that mathematics is human, mutable, historical, and evolving (Ernest, 1991; Reuben, 1997). According to Ernest (1991), fallibilism sees mathematics as the product of social processes and as always subject to change in both its notions and proofs.

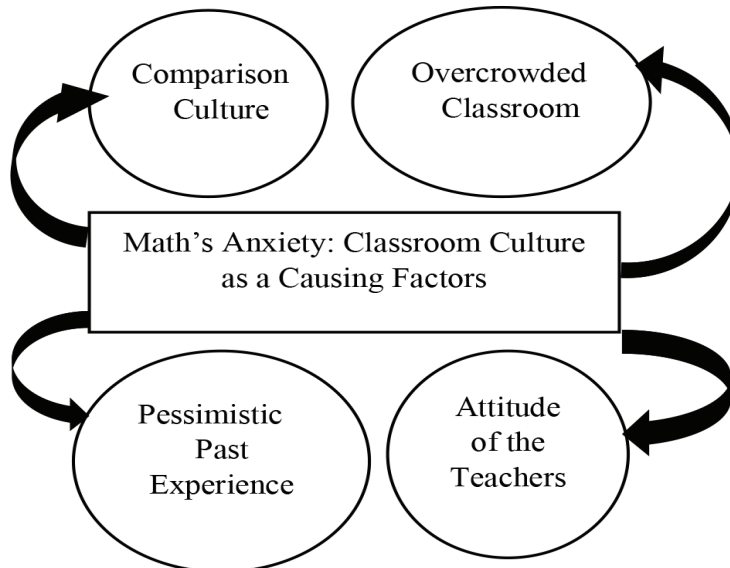
Student's mathematical worldview has been changed over the time and period. But it is unclear that the students when, how and why actually develop their minds mathematics as a discipline. In this context, Luttenberger, Wimmer, and Paechter, (2018) say that knowledge structures focus the cognitive aspect of teaching, knowledge must take priority over affect, in the form of beliefs. In this context, Mehmet, and Hulya, (2021) argued that belief is static and represent eternal truth that remain unchanged in a teacher's and students' mind regardless of the situation. Although, peer group score is also cause of math's anxiety, so peer discussion, sharing supportive environment have a great impact in minimizing the maths' anxiety Garba, Ismail, Osman and Rameli (2020). Moreover, Estonanto and Dio (2019) highlighted in their research the usual notion of mathematics is very difficult subject so students take negative attitudes towards learning due to lack of ability to control anxiety. Ngeche (2017) concluded the attitudes of students significantly influence their performance in mathematics and mathematics teachers were related to the attitude of the students towards the subject. Instructional behavior in the classroom also affects students' attitudes and performance. Learning mathematics does not only involve and reasoning so many researchers have concluded students attitude play a vital role in the learning of mathematics (Kele & Sharma, 2014). Students who struggle with mathematics might benefit from it by developing their understanding of other subject areas and their ability to think critically, logically, analytically, and creatively (Ajisuksmo & Saputri, 2017). They continued on to argue that as attitudes have an impact on cognitive functions,

students who have a favorable attitude toward mathematics strive to improve on their prior mathematical learning.

Students have shown complete understanding of mathematical concepts but during the testing time anxiety limits their ability to give the correct solution in the classroom learning (Rada, & Lucietto, 2022). In this context, attitudes play a central role in students learning so mathematics can therefore positively influence students towards mathematics flow positive attitudes in classroom practices and create interesting non-threatening environment in mathematics classroom. In this research article I can link Vygotsky's Socio- cultural theory which emphasizes classroom culture including instructional methods, interaction between teachers and students, as well as need to shape students' mathematical attitude and anxiety. The conceptual framework is given below.

**Figure 1**

*Conceptual Framework: Math's Anxiety: Classroom Culture as a Causing Factor*



## Methods

The teaching objectives emphasize on student performance and achievement while lowering maths anxiety. However, in this study, I attempted to ascertain whether math class teaching is anxious from the perspective of the students. In the community, educators and education experts in particular used solely to concentrate on the students achievement, but they did show a little attention to the student's anxiety. Because

teachers primarily employ autocratic approaches in the classroom. The current study attempted to understand secondary school students' perspectives and interpretations of their math anxiety as well as classroom circumstances as possible reasons. The study is quantitative in character and grounded in a positivist worldview. The survey was carried out to collect information from respondents. All 10th grade students were included in the study's population in Kathmandu Valley.

The schools were selected by using the random sampling. In selecting the sample, I have taken the weakest and lowest scorers students from the school record. Respondents were chosen using a random sampling procedure among students. The sample included 190 tenth-grade students from the Kathmandu district's 19 public secondary schools, 95 girls and 95 boys (5 girls and 5 boys in each schools). Data were gathered using a self-made questionnaire that had 35 statements based on literature and five point- -Likert type response options. Expert judgments confirmed the validity of the self-developed questionnaire, and I utilized the Delphi technique to assess the statements' validity. Reliability was established by computing the self-developed questionnaire's Cronbach's alpha score, which came out to be 0.85 and which is given below (Table 1)

**Table 1.**

*Four Components Its' Item Loaded and Factor Loading.*

Components	Items loaded	Rotated Factor Loading
Overcrowded Classroom (Cronbach's alpha = 0.814)	In overcrowded classroom, it is difficult to focus mathematics lesson clearly.	.781
	It is challenging for the teachers to provide individual attention	.780
	I feel anxious in overcrowded classroom	.682
	I believe that math anxiety affects my overall academic performance.	.671
	I feel isolated in my struggles with math in classroom	.637

	I fear that I won't understand new math lesson in the classroom	.621
	I feel that the classroom environment is competitive when it comes to math.	.583
	My teacher cannot control the classroom while teaching.	.583
	I feel like my math teacher doesn't understand my difficulties, for my better performance.	.581
	I feel that math class is more stressful than other subjects.	.581
<i>Attitude towards Mathematics (Cronbach's alpha = 0.779)</i>	I think that math is not relevant to my daily life.	.745
	I struggle to connect math concepts to real-world situations.	.723
	I find it hard to see the practical applications of math.	.721
	I feel that my math teacher expects too much from me.	.701
	I believe that math is a subject where I'm expected to life.	.691
	I think that my parents expect me to the best in math.	.678
	I feel like my math teacher doesn't understand my difficulties.	.656
	I feel that math homework takes up too much of my time.	.626
	I feel that math subject is more difficult to compare with other.	.577
	I believe that math class is more stressful than other subjects.	.547
<i>Pessimistic Past Experience (Cronbach's alpha = 0.776)</i>	I think that math teachers should provide more support for struggling students.	.494
	I believe that math is a subject where practice is more important than innate talent.	.746
	I believe my math is not good because I don't have old experience.	.746
	I don't like practicing my math lessons because I don't understand what I'm teaching	.655
	My math teacher says math is a rigorous subject in learning	.655
	My math teacher does not feel that math class should be more positive and supportive environment.	.541
	In my experience, math teachers always talk about frustration when math learning.	.517



Comparison (Cronbach's alpha = 0.723)	Culture I am worried when my mathematics teacher compare among the friends.	.80
	I feel anxiety when my parent compare me and my other friends.	.775
	I feel anxious when my friends associate to perform math calculations.	.66
	I think that math tests and exams are too challenging for me	.506
	I feel anxious that my math teacher does not understand only certain students are naturally good at it.	.339

### Results and Discussion

In this section, on the based on survey, I calculated reliability of the survey of 190 samples by using Cronbach's Alpha, which is given below (Table 2).

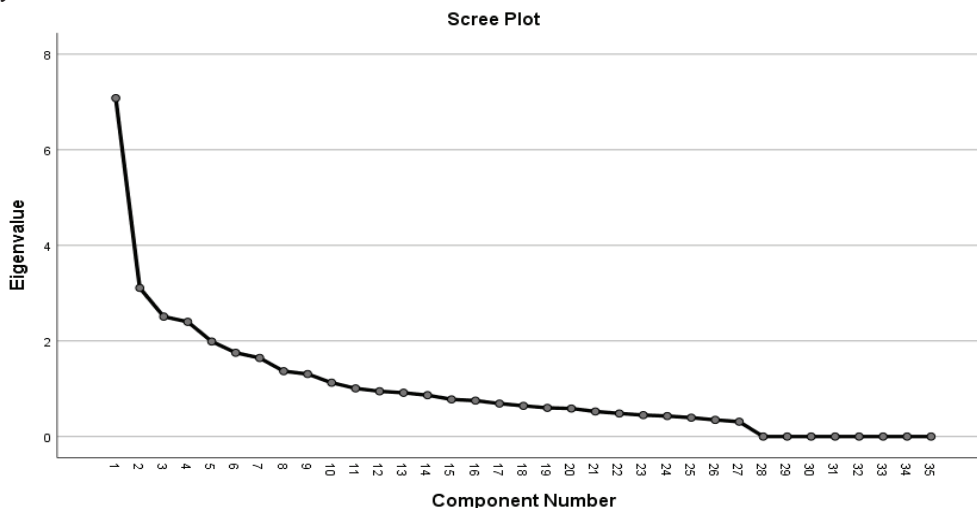
**Table 2**  
*Reliability*

Category	Statistics over the Reliability		
	Number of items	Cronbach's Alpha	Number of Sample Size
Sample Respondents	35	0.85	190

The internal reliability of each component was also evaluated using Cronbach Alpha 0.85, and principal components analysis was used to create four factors. Ten elements were loaded into the first component in this context, which was called the *Overcrowded Classroom*. Its Cronbach's Alpha value was 0.814. Factor loading values for this component ranged from 0.781 to 0.361 (higher than 0.3). Eleven more items, with a Cronbach Alpha of 0.779 and a range of 0.645 to 0.413, were added to the second component, *Attitude Toward Mathematics*. Similar to this, six elements were loaded into the third component, which was called *Pessimistic Past Experience*. With a range of 0.776 to 0.485, its Cronbach Alpha was 0.776. The final element was dubbed *Comparison Culture*, and its Cronbach Alpha score was 0.723, ranging from 0.820 to 0.339. Four possible numbers of components from four different elbows with eigenvalues greater than one were found by observing the scree plot.

**Figure 2**

*Math's Anxiety Scree Plots by Component: Classroom Culture as a Causing Factor analysis with Varimax Kaiser Normalization*



In order to compare the neutral value (test value = 3), which is based on the average value of five points on Likert scales, descriptive statistics (mean and standard deviation) were computed for each of the four components. To determine if the mean differences were significant at the level of significance, a one-sample t-test was performed on the basis of collected survey data.

**Overcrowded Classroom**

This factor's (*Overcrowded Classroom*) Cronbach Alpha was 0.814, which is reliable since it is higher than 0.6. This section includes ten concerns, with the item about an overcrowded classroom receiving the highest rating of 4.13. I also think that my anxiety in math has an impact on my overall academic performance. Likewise, the item "I feel that math class is more stressful than other subjects" had the lowest number, 1.85. At the significance level of 0.05 (P<0.05), there was a significant difference in the participant's opinions on every item. It may be difficult for teachers to give every student their full attention in crowded classrooms. Anxiety can be brought on by the worry of not receiving the right assistance. Students find it challenging to focus on mathematical ideas in overcrowded classes since they are frequently noisier and more confused. As it becomes more difficult to concentrate on studying, the frequent interruptions might lead to an increase in tension and worry (Whyte &Anthony, 2012). There are less possibilities for students to actively participate in conversations, ask questions, or offer their opinions in a crowded classroom. Overcrowded classrooms may have limited access to educational resources, such as textbooks, online tutorials, or supplementary materials.

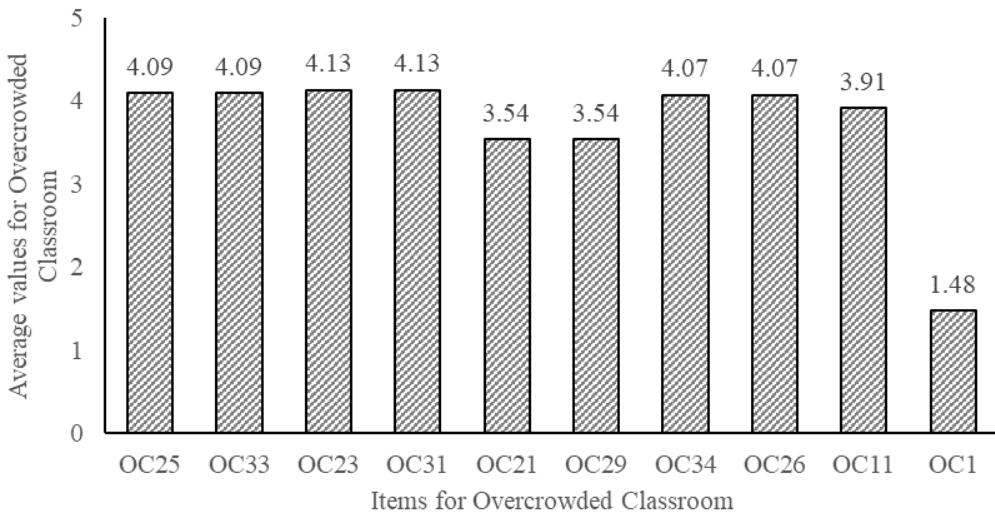
**Table 3**

*Descriptive Statistics and One -sample t-Test for the Factor in Overcrowded Classroom*

Items	N	Mea	S.D.	Mean	t-value	sig. (Two-tailed)	(Neutral Value = 3)		
							Differ- ence	95% Confidence Interval	
								Upper	Lower
OC25	190	4.09	.778	1.095	19.405	.000	.98	1.21	
OC33	190	4.09	.778	1.095	19.405	.000	.98	1.21	
OC23	190	4.13	.793	1.126	19.568	.000	1.01	1.24	
OC31	190	4.13	.793	1.126	19.568	.000	1.01	1.24	
OC21	190	3.54	.974	.537	7.599	.000	.40	.68	
OC29	190	3.54	.974	.537	7.599	.000	.40	.68	
OC34	190	4.07	.857	1.074	17.259	.000	.95	1.20	
OC26	190	4.07	.857	1.074	17.259	.000	.95	1.20	
OC11	190	3.91	.696	.911	18.040	.000	.81	1.01	
OC1	190	1.48	.501	-1.521	-41.859	.000	-1.59	-1.45	

**Figure 3**

*The Average Value on Component Overcrowded Classroom*



**Attitude towards Mathematics**

This factor's (*Attitude towards Mathematics*) Cronbach Alpha was 0.779, which is reliable since it is higher than 0.6. This component had eleven items, with the item "I find it hard to see the practical applications of math" receiving the highest rating

of 4.49. In a comparable way, the item where I believe math professors should help struggling students more has the lowest value, 3.83. Every item received a rating higher than the neutral value of 3, or average value. At the significance level of 0.05 ( $P < 0.05$ ), there was a significant difference in the participant's opinions on every item.

In fact, negative prior experiences can be a major contributor to math's fear. Negative math's experiences, whether they occur early in a person's education or later in their academic career, can have a long-lasting effect on their mindset and level of confidence. Anxiety and a sense of inadequacy might result from prior failures or poor performance in maths, such as failing tests or repeatedly earning low results (Zakaaria, 2018). People may develop the notion that they are incapable of comprehending or succeeding in maths as a result of these experiences. Negative prior experiences could include uncomfortable situations in maths class, like being unable to respond to a question in front of the class and these ideas can imprint themselves firmly, influencing future attitudes and mathematical conduct (Bhetuwal, 2022). It's critical to understand that math anxiety brought on by negative prior experiences can be handled and lessened (Ngeche, 2017). Students and teachers both can change their negative ideas, gain confidence, and adopt more favorable attitudes towards mathematics by using modern techniques, counselling ( See Table 4).

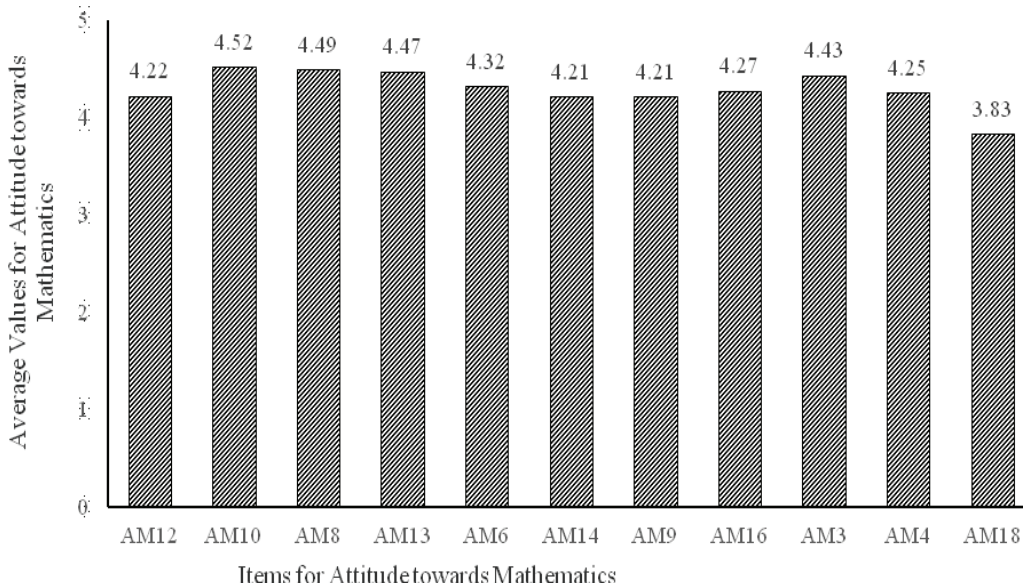
**Table 4.**

*Descriptive Statistics and One-sample t-Test for the Factor in Attitude towards Mathematics*

Items	N	Mea	S.D.	Mean Differ- ence	t-value	sig. (Two- tailed)	95% Confidence Interval	
							Upper	Lower
AM12	190	4.22	.700	1.221	24.031	.000	1.12	1.32
AM10	190	4.52	.640	1.516	32.638	.000	1.42	1.61
AM8	190	4.49	.615	1.489	33.385	.000	1.40	1.58
AM13	190	4.47	.656	1.468	30.859	.000	1.37	1.56
AM6	190	4.32	.888	1.316	20.423	.000	1.19	1.44
AM14	190	4.21	.646	1.205	25.697	.000	1.11	1.30
AM9	190	4.21	.716	1.205	23.191	.000	1.10	1.31
AM16	190	4.27	.718	1.268	24.366	.000	1.17	1.37
AM3	190	4.43	.594	1.432	33.239	.000	1.35	1.52
AM4	190	4.25	.814	1.247	21.111	.000	1.13	1.36
AM18	190	3.83	.869	.832	13.196	.000	.71	.96

**Figure 4**

*The Average Value on Component Ownership of Teaching*



**Pessimistic Past Experience**

The Cronbach Alpha of this factor (*Pessimistic Past Experience*) was 0.776 which is reliable because its value is greater than 0.6. This factor included six items and respondents rated the highest value is 3.74 related to the item math teachers always talk about frustration when math learning. Similarly, lowest value is 3.31 related to the item my math teacher does not feel that math class should be more positive and supportive environment. Moreover the respondents were rated higher average value to compare with neutral value (test value= 3). The participant’s opinion in all items were significant difference at the level of significance 0.05 ( $P < 0.05$ ).

Students may have anxiety if they have a bad attitude towards mathematics and think they will struggle with it or won't be good at it. Such students could approach math-related tasks with a pessimistic mindset, which makes it tougher for them to be interested in the topic (Dianabasi, Imo, & Diwa, 2017). Fear of failing is frequently the root cause of a pessimistic attitude so a person may experience anxiety when faced with math-related issues if they anticipate failing or performing poorly (Rada, & Lucietto, 2022). (See Table 5).

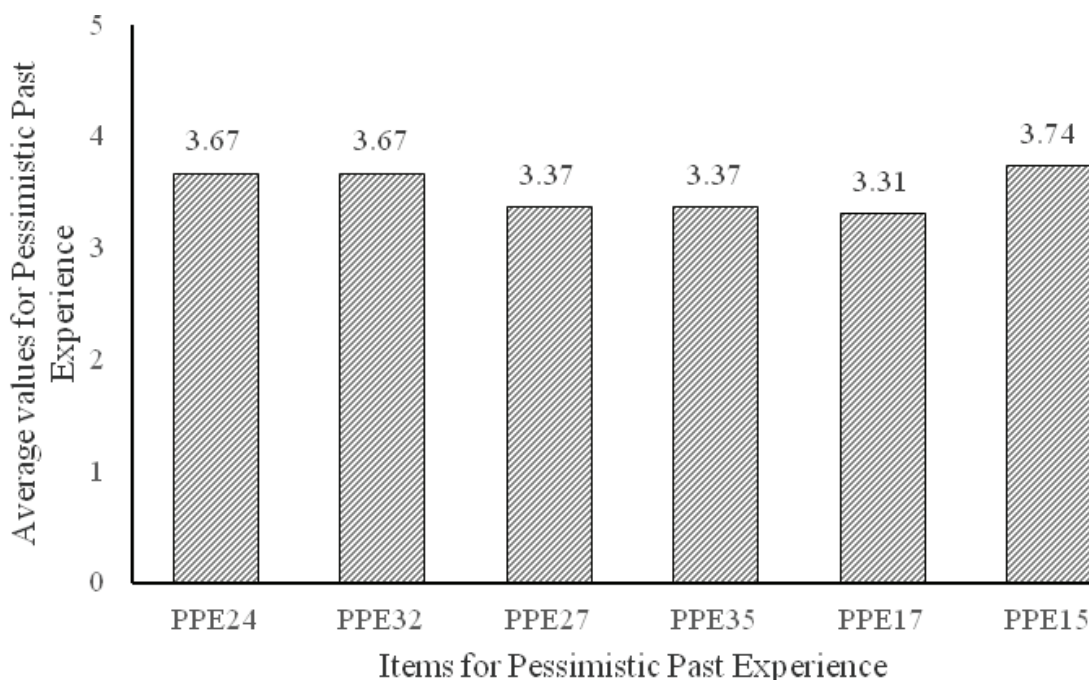
**Table 5**

*Descriptive Statistics and One-sample t-Test for the Factor in Pessimistic Past Experiences*

Items	N	Mea	S.D.	Mean Difference	t-value	sig. (Two-tailed)	95% Confidence Interval	
							Upper	Lower
							(Neutral Value = 3)	
PPE32	190	3.67	.981	.674	9.469	.000	.53	.81
PPE27	190	3.37	1.142	.374	4.511	.000	.21	.54
PPE35	190	3.37	1.142	.374	4.511	.000	.21	.54
PPE17	190	3.31	1.045	.305	4.028	.000	.16	.45
PPE15	190	3.74	.927	.742	11.036	.000	.61	.87

**Figure 5**

*The Average Value on Component Pessimistic Past Experience*



**Comparison Culture**

The Cronbach Alpha of this factor (*Comparison Culture*) was 0.723 which is reliable because its value is greater than 0.6. This factor included five items and they rated the highest value is 4.11 related to two items like as I am worried when my

mathematics teacher compare among the friends and I feel anxiety when my parents also compare with my other friends. Similarly, lowest value is 1.79 related to the item my math teacher does not understand only certain students are naturally good at it. The participant’s opinion in all items were significant difference at the level of significance 0.05 ( $P < 0.05$ ).

Students frequently contrast their mathematical skills with those of their peers in a comparison-based culture. Students may experience emotions of inadequacy and self-doubt when they believe that others are performing better. As students feel pressure to measure up as a result of the ongoing peer comparison, math anxiety may become more severe (Ngeche, 2017). Even when it is not conducive to good learning, this fear of criticism can cause anxiety and pressure to perform. Peer pressure is just one aspect of comparison culture; it can also be influenced by parental and household expectations (Yasar, 2016). Parents may make comparisons between their child's maths achievement and that of other students, which causes the children additional worry and anxiety. Students' fear of unfair comparisons may prevent them from taking risks or asking for assistance when they do (See Table 6).

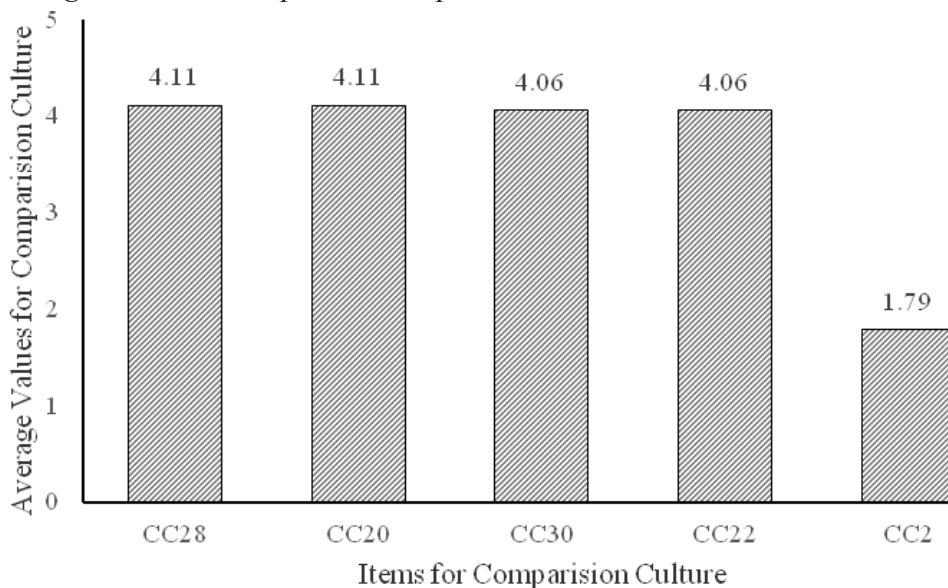
**Table 6**

*Descriptive Statistics and One-sample t-Test for the Factor in Comparison Culture*

(Neutral Value = 3)								
Items	N	Mea	S.D.	Mean Dif- ference	t-value	sig. (Two- tailed)	95% Confidence Interval	
							Upper	Lower
CC28	190	4.11	.931	16.360	16.360	.000	.97	1.24
CC20	190	4.11	.931	16.360	16.360	.000	.97	1.24
CC30	190	4.06	.774	18.932	18.932	.000	.95	1.17
CC22	190	4.06	.774	18.932	18.932	.000	.95	1.17
CC2	190	1.79	.409	-40.821	-40.821	.000	-1.27	-1.15

**Figure 6**

*The Average Value on Component Comparison Culture*



### Conclusion

Many students are impacted by math anxiety, a real psychological issue. When presented with mathematical activities or circumstances, it manifests as feelings of anxiety, worry, and apprehension. In the onset and escalation of mathematics anxiety, the classroom setting is a major factor. Students' anxiety about maths may start off mild or grow worse due to factors in the classroom. Generally, math's anxiety depends upon overcrowded classroom, attitude over the mathematics, pessimistic past experiences and comparison culture are the main components in this study. On the other hand, mathematics anxiety can be increased by teachers who extensively rely on memorization drills, deliver lessons quickly, or show a lack of empathy for their students' unique requirements. Students regularly compare their mathematical prowess with that of their classmates in the classroom. In particular, when students feel as though they are falling behind or not measuring up to expectations, this social pressure can increase math anxiety. Students' fear of failure or poor performance might be exacerbated by frequent testing and examinations. Additionally, competitive grading procedures or student rankings based on mathematics proficiency might exacerbate anxiety. Reducing math fear requires cultivating a good and encouraging teaching environment. Students can feel more assured in their mathematical ability



when their teachers promote a growth mindset, welcome questioning, and give helpful comments. In conclusion, math anxiety is an extensive issue, and the classroom setting can have a big impact on how it develops and maintains. Math anxiety in students is more likely to be decreased by teachers that use efficient and student-centered teaching techniques. Students can enhance their overall math performance and build an enjoyable relationship with mathematics by acknowledging math anxiety as a real issue and taking action to reduce its effect.

### **Implications**

Math's anxiety is the term for stress, worry, or fear that gets in the way of a person's ability to do math problems. The growth of irritation by math's anxiety can be greatly influenced by the instructive background. Teachers ought to use inclusive teaching practices that accommodate a range of student learning capacities and styles. This contributes to the establishment of a setting where students perceive that their unique requirements are recognized and fulfilled. By using modified teaching, students may advance at their own speed and gain confidence in their mathematics skills. It facilitates the development of a constructive and encouraging learning environment in the classroom where students are less afraid to make less errors and are encouraged to ask questions. Encouraging parental involvement in their child's education and providing them with updates on their mathematical development is beneficial. Math anxiety is significantly reduced by the encouragement and support of parents. Teachers may cultivate a healthy attitude towards mathematics teaching and the development of the skills and make confidence among students must succeed in the subject by tackling math anxiety in the classroom.

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