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# Analysis of the Factors Causing Mathematics Anxiety in Junior High School Students with and without Learning Difficulties

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#### Abstract

Math anxiety is a common condition experienced by students and can hinder student learning achievement. This study aims to describe what factors cause math anxiety in junior high school students with learning difficulties and without learning difficulties. This research is a descriptive type of qualitative research. The research subjects consisted of 27 students of class VIII4 SMP Negeri 11 Lhokseumawe. The sampling technique used was purposive sampling. The research data were collected using questionnaires and interviews. Data analysis techniques used are data reduction, data presentation, and conclusion drawing. The results showed that the causes of math anxiety in junior high school students with learning difficulties come from environmental factors such as a less conducive classroom atmosphere, negative comments from classmates, parents' expectations to get good grades. Internal factors causing math anxiety include not being able to complete tasks given by the teacher and lack of preparation when facing exams. The factors that cause math anxiety in students without learning difficulties are based on environmental factors such as: interference from friends, the teacher's weak ability to convey subject matter, and encouragement from parents so that their children get good grades, giving quizzes / questions suddenly. Internal factors such as the wrong learning style and not completing assignments. and intellectual factors such as difficulty in understanding and mastering learning material.

*Keywords:* Factors Causing Mathematics Anxiety; Mathematics Anxiety; Learning Difficulties.

#### Abstrak

Kecemasan matematika merupakan kondisi umum yang dialami siswa serta dapat menghambat prestasi belajar siswa. Penelitian ini bertujuan untuk mendeskripsikan faktor apa saja yang menjadi penyebab kecemasan matematika pada siswa Sekolah Menengah Pertama (SMP) dengan kesulitan belajar dan tanpa kesulitan belajar. Penelitian ini merupakan penelitian kualitatif jenis deskriptif. Subjek penelitian terdiri dari 27 orang siswa kelas VIII4 SMP Negeri 11 Lhokseumawe. Teknik pengambilan sampel yang digunakan adalah purposive sampling. Data penelitian dikumpulkan dengan menggunakan angket dan wawancara. Teknik analisis data yang digunakan adalah reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa penyebab kecemasan matematika pada siswa SMP dengan kesulitan belajar berasal dari faktor lingkungan seperti suasana kelas yang kurang kondusif, komentar negatif dari teman sekelas, harapan orang tua agar mendapat nilai bagus. Faktor internal penyebab kecemasan matematika meliputi tidak dapat menyelesaikan tugas yang diberikan guru dan kurangnya persiapan saat

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mengahadapi ujian. Faktor penyebab kecemasan matematika pada siswa tanpa kesulitan belajar berasal dari faktor lingkungan seperti: gangguan dari teman, lemahnya kemampuan guru dalam menyampaikan materi pelajaran,dan dorongan dari orang tua agar anak nya mendapatkan nilai yang bagus, pemberian kuis/ pertanyaan secara tiba-tiba. Faktor internal seperti gaya belajar yang salah dan belum menyelesaikan tugas dan faktor intelektual seperti kesulitan dalam memahami dan menguasai materi pembelajaran.

Kata Kunci: Faktor Kecemasan Matematika; Kecemasan Matematika; Kesulitan Belajar.

#### **INTRODUCTION**

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Mathematics is one of the most important subjects to be studied at every level of education, starting from elementary, junior high, senior high, to higher education. As stated in Article 37 of Indonesian Law No. 20 of 2003 concerning the National Education System, mathematics is required as one of the main subjects in the process of developing students' thinking. This shows how crucial the mastery of mathematics is for students in primary and secondary education, hereinafter referred to as school mathematics (Chairani, 2016).

Despite its importance, learning mathematics in school often leads to a variety of perceptions among students. These perceptions can be both positive and negative. Positive perceptions can encourage students to feel excited, happy, optimistic, and enjoy learning mathematics. Conversely, negative perceptions can lead to fear, anxiety, and nervousness, known as math anxiety (Hakim, 2021). According to Bursal and Paznoskan in (Auliya, 2016) math anxiety is a condition in which a person feels helpless or panic when faced with mathematical tasks. This can be caused by feelings of inability to understand and apply mathematical concepts or bad experiences experienced during the learning process.

This sense of inadequacy and bad experience often causes students to experience difficulties in learning mathematics. This is reflected in the lack of active participation of students, who tend to only be listeners to the information conveyed by the teacher. Often, students perceive math as a difficult and confusing subject because it involves many formulas, so they have difficulty understanding the material being taught. Research conducted by (Ikhsan, 2019) shows that students with high levels of math anxiety tend to have low learning outcomes. Conversely, students with low levels of anxiety usually achieve better learning outcomes. Factors that affect math learning difficulties are divided into two main categories: internal factors, which come from within the student, and external factors, which come from the student's external environment (Kurniawan & Fitriani, 2020).

Erdogan in (Niut et al., 2020) states that math anxiety has a significant influence in hindering students' learning achievement. Math anxiety can also occur in students who do not have learning difficulties. This anxiety can be triggered by high academic demands (Carey et al., 2019). Research conducted by (Tahir et al., 2015) showed that the higher the level of learning difficulties and math anxiety, the lower the learning outcomes obtained by students.

Identifying the causes of math anxiety, both in students with learning difficulties and without learning difficulties, is critically important. By understanding the underlying factors that contribute to math anxiety, teachers, parents, and educational practitioners can develop effective and targeted strategies to help students manage their anxiety. This, in turn, can lead to improved academic performance and a more positive and rewarding learning experience in mathematics.

Despite the increasing number of studies on math anxiety, most existing research tends to generalize students as a homogeneous group, often overlooking the nuanced differences between those with and without learning difficulties. This generalization creates a significant research gap, as students with learning difficulties may experience anxiety due to distinct cognitive, emotional, and environmental triggers compared to their peers without such difficulties. Furthermore, many previous studies have primarily focused on quantitative approaches without exploring students' perspectives in depth.

Based on these considerations, this study aims to identify and differentiate the factors that cause math anxiety among junior high school students, specifically comparing those with learning difficulties and those without. The novelty of this research lies in its qualitative approach, which provides rich,

contextual insights into the lived experiences of both groups. By capturing students' voices directly through in-depth interviews, this study offers a more holistic understanding of how math anxiety manifests differently across learner profiles. The findings are expected to contribute valuable insights for educators, parents, and educational stakeholders in designing more inclusive and responsive interventions to reduce math anxiety and enhance students' academic success and learning engagement.

#### **RESEARCH METHODS**

This research is qualitative with a descriptive approach, which aims to describe and explain the factors that cause math anxiety in students with learning difficulties and without learning difficulties at SMP Negeri 11 Lhokseumawe. This research was conducted at SMP Negeri 11 Lhokseumawe which is located on jl. Banda Aceh -Medan, Ulee Blang Mane, Blang Mangat, Ulee Blang Mane, Lhokseumawe, Aceh. The research subjects consisted of 27 students of class VIII4 SMPN 11 Lhokseumawe. Sampling through Purposive sampling technique. Data collection techniques in this research are questionnaires and interviews. The instruments used are learning difficulty questionnaire, math anxiety questionnaire and interview guidelines. Then in-depth interviews were conducted with 3 students with learning difficulties and 3 students without learning difficulties to gain further understanding of the factors that cause math anxiety. the data analysis technique used in this research is the Miles and Huberman model data analysis technique which includes three activities: data reduction, data display, and conclusion drawing and verification.

#### **RESULTS AND DISCUSSION**

At the implementation stage, the researchers distributed a questionnaire on learning difficulties to 27 students at SMPN 11 Lhokseumawe as an initial step to identify the individual conditions of each student. This questionnaire was designed to assess the extent to which students experience obstacles in the learning process, particularly in mathematics. Based on the analysis of the questionnaire results, six students were selected as participants for further study, consisting of three students with learning difficulties and three students without learning difficulties. This selection was carried out purposively, taking into account the diversity of backgrounds and academic characteristics in order to reflect different experiences and responses to mathematics anxiety more deeply.

The number of six students was determined based on a qualitative approach, which emphasizes the depth of exploration rather than a large sample size. Through in-depth interviews with these six students, the researchers collected more detailed data on their experiences, feelings, and the factors that trigger mathematics anxiety. The analysis of the interview data revealed that the causes of mathematics anxiety in students with and without learning difficulties followed different patterns, providing new insights into the cognitive, emotional, and environmental aspects that contribute to the emergence of mathematics anxiety in each group.

### Factors causing math anxiety in students with learning difficulties

The results of the analysis of the learning anxiety questionnaire show that subjects with learning difficulties feel uncomfortable when studying mathematics.

No	Pernyataan	STS	TS	KS	S	SS
1	Saya merasa nyaman dan mudah saat mengikuti pelajaran matematika.			$\checkmark$		

Figure 1. Students Feel Very Uncomfortable When Learning Math

The results of the interviews show that the cause of math anxiety in students with learning difficulties is caused by a less conducive classroom atmosphere. Students with learning difficulties feel that the classroom atmosphere is too noisy, causing these students to feel unable to concentrate on learning.

- *P* : "Why are you uncomfortable when learning math?"
- S1 : "If the class is too noisy, I can't concentrate on learning" ... "If the class is noisy, I get confused about which voice to focus on" ... "If it's noisy, the voice of the teacher who teaches is like mixed with the voice of friends, so I prefer to listen to friends" ... "It's useless, sis, if I listen to the teacher, I don't focus and don't

understand what the teacher explains because my friend's voice is bigger than the teacher's voice."

A less conducive classroom atmosphere can cause students to be uncomfortable when learning math. A sense of discomfort when learning math will arise if the class is noisy. A noisy class will disturb students' learning concentration. So that students will have difficulty in listening to the learning given by the teacher. This is in line with the results of research (Dina & Lukita Ambarwati, 2022) which states that an unfavorable learning atmosphere can cause students to become anxious during math learning.

Another subject stated that she felt afraid when taking math lessons due to the negative views of her classmates. The subject was afraid of being laughed at if he could not answer/explain math assignments in front of the class. the following is an excerpt of the interview with the subject.

- *P* : "Why do you feel scared during math lessons?"
- *S2* : "I am afraid because I am often told to come forward and be told to explain" ... "usually the teacher tells me to explain how to solve the problems that have been given".
- *P* : "Can you explain if you are told to"
- S2 : No sis, that's why I'm afraid to take math lessons. Because I can't answer, I'll be laughed at by my friends."

Negative comments can cause students to feel untalented in mathematics so that it can reduce the student's self-confidence. This is because negative views from people will make students feel that they have shortcomings. (Marpuri & Wibowo, 2019) state that negative views from friends can cause students to lack confidence so that they can cause math anxiety when facing math problems. Based on the questionnaire results, it show that the research subjects felt anxiety before entering the math room.



#### Figure 2 Students Feel Very Anxious Before Entering The Math Classroom

Based on the results of the interviews, it shows that feelings of anxiety before learning mathematics can arise due to panic that arises because they have not completed the tasks given by the teacher. When students cannot complete math assignments, students will feel anxious about the consequences they will receive as a result of not completing the assignment. The following are excerpts of interviews with subjects.

*P* : "why do you feel anxiety e before entering Math class?"

S2 : "because I haven't prepared my homework. Everyone at home doesn't understand. I searched but couldn't find the answer. The teacher is angry. It's like being scolded but it's like regretting not being able to prepare homework. I'll pay more attention to it tomorrow."

When students cannot complete the tasks given, it will cause students to worry about the consequences they will receive. In addition, difficulties in solving math problems will lead to the thought that math is a difficult subject. If these thoughts have become a mindset, it is certain that the student has math anxiety (Anditya & Murtiyasa, 2016).

Another subject stated that the cause of the emergence of feelings of anxiety before entering the math room was due to the subject's lack of understanding of the multiplication calculation operation so that the subject felt afraid when dealing with math.

- *P* : "Why do you feel anxiety before entering Math class?"
- S1 : "... like I don't like math....but I don't like math. because math is hard, there's a lot to think about. I can't do multiplication tables, so it's hard if I get a problem that has multiplication tables."

When facing more complex problems, students who lack mastery of arithmetic operations such as multiplication and division will take longer than their peers in completing math tasks. this can cause math anxiety when given exams or exercises in a short time.

The results of the analysis of the math anxiety questionnaire also show that students with learning difficulties feel afraid when facing math exams.

6	Saya selalu merasa takut saat mengikuti ujian	
7	matematika.	V

Figure 3. Students Feel Scared When Taking Math Exams

The results of interviews with research subjects show that the cause of students experiencing math anxiety is the lack of preparation for the exam so that it can cause students to be afraid of not being able to complete the exam and will affect their grades. The following are excerpts of interviews with research subjects.

*P* : "Why do you feel afraid during math exams?"

- S1 : "I'm afraid I won't be able to answer during the exam. Afraid of getting a lot wrong, then the grade will drop" ... "If I'm at home I'm lazy to study, but in the morning I can study with friends."
- S3 : "Afraid that many mistakes will affect the report card" ... "usually learn from sample problems that have been given" ... "Afraid that I won't be promoted to the next grade" ... "I was scolded by my mother. I was told that I was just playing games. never, just threatened to take the cellphone, but I didn't take the handphone."

Lack of preparation when facing exams in students with learning difficulties can occur due to errors in the choice of learning methods. Where students choose to study only in a short time and only learn from sample problems given by the teacher. This method is less effective when facing exams because it will make students only focus on how to solve problems without understanding how the concepts in the problem. This is in accordance with the results of research conducted by (Anditya & Murtiyasa, 2016) which states that one of the causes of students experiencing mathematics anxiety is caused by a lack of preparation when taking the exam.

Other subjects also stated that the cause of students with learning difficulties feeling afraid when taking exams is due to pressure from parents to maintain their math grades.

- *P* : "Why did you feel afraid during the math test?"
- *S2* : "I'm afraid I can't answer because I'm afraid my score will go down. Because if my score goes down, I will be scolded by my mother. I try to study harder and prepare myself as well as possible before the exam. I usually make a summary of the lesson".

Anditya & Murtiyasa, (2016) argue that expectations from parents to get good grades can cause students to become depressed and ultimately cause math anxiety. Students who have learning difficulties will find it difficult to meet parents' expectations because they alone have difficulty in learning math material. The stress that arises can cause students to feel anxious and afraid when facing math exams. students with learning difficulties will feel afraid if they answer the wrong questions so that their report card scores will decrease. Therefore, as parents, we must always support all positive activities carried out by the child so that the child feels comfortable and not burdened when facing learning that they are not good at, such as math.

#### Factors causing math anxiety in students without learning difficulties

No	Pernyataan	STS	TS	KS	S	SS
1	Saya merasa nyaman dan mudah saat mengikuti pelajaran matematika.	V				

Figure 4. Students Feel Very Uncomfortable During Math Lessons

The results of the questionnaire analysis show that students without learning difficulties feel very uncomfortable when learning mathematics. based on the results of the interview, it shows that the cause of the subject feeling very uncomfortable is because he often gets interference from his friends. the following is an excerpt of the interview with the subject.

*P* : "Why do you feel uncomfortable when learning math?"

S4 : "Because it is often disturbed by friends. These people like to play while studying, sometimes disturb us while studying" ... "Yes sis, these people make us unable to concentrate on studying. Often. If we don't respond later, they will bully us, saying that we are smart. Why study when you're already smart. yes, than later we won't be friends."

Learning disorders that occur can cause students to become unfocused in learning so that they prefer to follow the wishes of their friends with the aim that these students are not ostracized and considered smartasses. lack of focus while learning can cause students to feel unprepared and can cause students to feel anxious when facing exercises and exams.

According to the results of research conducted by (Sugiatno & Dery, 2015), it shows that one of the factors causing math anxiety is caused by a learning environment that is less supportive of the learning process such as distractions in learning.

Other subjects stated that the cause of the emergence of discomfort when learning math was caused by giving impromptu quizzes, where they became afraid of getting difficult questions so that it would affect their grades. Impromptu quizzes can cause anxiety because students feel they do not have enough time to prepare themselves. The following are excerpts of interviews with research subjects.

*P* : "Why do you feel afraid when taking math lessons?"

*S5* : "Fear of not being able to answer if there is an impromptu quiz from the teacher, panic and confusion are like mixed up. Like panic, just afraid if what comes out is a difficult question, afraid of being wrong when calculating."

Students who are used to preparing for exams will feel unprepared for quizzes that are held without prior notice. In addition, impromptu quizzes also have an element of uncertainty that will make students anxious. Uncertainty about the material or questions that will be given can also increase anxiety in students. according to (Dinawati & Siswono, 2020) giving quizzes suddenly can cause anxiety in students. This can be caused by factors such as lack of preparation, time pressure, and discomfort in dealing with unexpected situations that can trigger anxiety. This anxiety can be in the form of feelings of fear, anxiety, or restlessness, which can interfere with the learning process and reduce student performance in math subjects.

The analysis of the math anxiety questionnaire shows that students without learning difficulties feel anxious before entering the math classroom.

3	Saya merasa cemas	
	sebelum memasuki ruang kelas matematika.	

Figure 5. Students Feel Anxious Before Entering the Math Classroom

The results of interviews with subjects who feel anxious before entering the math classroom are caused by not being able to complete math assignments and also limitations in seeking help. The following are excerpts of interviews with research subjects. Vol. 13, No. 01 Juni 2025

S4 : "usually because there are assignments that have not been made. Because we don't understand the material to answer the problem. We ask friends, sometimes we ask dad. Sometimes we understand, sometimes we don't understand, sometimes our friends understand, sometimes they don't. We usually google it, but if it's not there, it's usually not collected."

Math anxiety can arise when students forget to do their homework so that they feel worried that they will be scolded by their teacher if they cannot complete it. The majority of students feel that completing math assignments is an activity that can drain them because they think that math has long and difficult solutions and problems to answer.

Another subject stated that the reason he felt anxious when learning math was due to a dislike for math caused by students having difficulty understanding the material. According to (Muqtafia et al., 2022) although students do not have learning difficulties in general, they may have difficulty understanding and remembering mathematical formulas. In addition, the way the teacher teaches is also one of the causes of students becoming anxious when learning math. The following are excerpts of interviews with research subjects.

- *P* : "why do you feel anxious before entering the math classroom?"
- S6 : "because I don't like math because it's hard" ... 'I've been in it before' ... 'because it's hard, especially if I've learned that there are x and y' ... 'I don't understand because it's hard, the teacher gives a lot of notes instead of explaining' ... "I don't understand, that's it, I don't look for it because I don't like math, I'm lazy too."

Students who do not have learning difficulties often fear not being able to achieve their expectations. This is because students who do not have learning difficulties tend to have high expectations of their abilities. When they cannot understand a material, they will feel anxious when dealing with problems related to that material.

The results of research conducted by (Milena et al., 2022) show that the cause of math anxiety in students with high learning outcomes is caused by students who feel confused in mastering the material and understanding the learning material.

In addition, according to (Anditya & Murtiyasa, 2016), one of the causes of math anxiety is the teacher's weak ability to convey the subject matter being studied. Teachers' teaching methods that cannot summarize all students' learning styles can cause students to not understand the material being studied. Low student understanding can cause students to worry about not being able to solve the problems given. Therefore, teachers must be able to deliver material by applying learning methods that can cover all learning styles of students.

The results of the analysis of the math anxiety questionnaire show that students without learning difficulties feel fear when going to take a math exam.



Figure 6. Students Feel Scared When Taking Math Exams

The results of the interview with the research subject stated that the subject felt fear when taking the math exam due to encouragement from parents so that their children get good grades often make children who do not have learning difficulties feel anxious. They are afraid that if they cannot maintain their learning results it will make their parents disappointed. The following are excerpts of interviews with research subjects.

- *P* : "Why do you feel scared during math exams?
- S6 : "...Afraid, but what else can I do. Afraid if you don't get good grades, but usually just surrender. The important thing is to go up in class" ... 'There is, mom doesn't get angry' ... 'tell me to study more' ... 'No sis, many other friends are like that too'
- *S5* : "I'm afraid that if I can't answer, my grades will drop. The grades go down and my mom also gets angry if the grades go down."

According to the opinion of (Anditya & Murtiyasa, 2016) one of the causes of math anxiety is the expectation of the family to get good grades. When families expect their children to get good math scores, on the other hand the child is less able to master math subject matter, this can cause children to feel depressed. This sense of pressure is the cause of math anxiety in children.

Another subject stated that the cause of mathematics anxiety when taking mathematics exams is caused by the wrong way of learning which can also cause students to become anxious during exams. where students memorize lessons instead of understanding so that when they find different questions students become afraid that they cannot answer these questions. The following are excerpts of interviews with research subjects

- *P* : "why do you feel afraid during math exams?
- S4 : "Because I don't memorize the formula, I don't understand the material so in order to be able to answer, I just memorize the formula. If the questions are exactly the same, I can answer them, but if the questions are different, I can't answer them" ... "Sometimes the mother gives us the same questions when we practice as the example but when we take the exam, the questions are different, there is already a story"

The wrong learning style can cause students without learning difficulties to feel anxious. Students without learning difficulties often memorize to master the material. This memorization method is a learning style that is not suitable for application in learning mathematics or in preparation for exams. because by memorizing students will only focus on the formulas and example problems given by the teacher. So that when the teacher changes the form of the problem into another form, students will have difficulty solving it.

According to the opinion of Trujilo and Hadfield in (Milena et al., 2022) one of the causes of math anxiety experienced by students is caused by learning styles that are not suitable so that students feel uncomfortable with math lessons.

The results showed that the causes of math anxiety in students with learning difficulties and without learning difficulties are not only caused by one factor but there are several factors related to each other. This is in accordance with the opinion of Trujilo and Peker in (Milena et al., 2022) which states that the causes of math anxiety can be grouped into 3 categories, namely personality factors, environmental factors and intellectual factors.

Math anxiety will usually appear before or when students are dealing with tasks or learning processes related to mathematics. this is often the cause of students disliking math and tending to avoid everything related to math. math

anxiety also cannot be underestimated because it can hinder the development of students' knowledge.

This study identifies diverse and comprehensive factors contributing to mathematics anxiety among junior high school students, clearly distinguishing between students with and without learning difficulties. This differentiation aids in understanding the various dimensions and specific challenges faced by each group. For students with learning difficulties, the dominant factors contributing to mathematics anxiety include classroom environmental disturbances, fear of negative peer evaluation, incomplete homework, deficits in fundamental skills, parental pressure, and ineffective learning strategies. Specifically, classroom noise significantly affects concentration and comprehension (Siti Ashari Arbiah Harahap & Vebi Radiatul Rahman, 2023). Additionally, negative peer comments act as anxiety triggers, undermining students' confidence and motivation. Parental pressure further exacerbates anxiety, as parental expectations may increase stress levels, particularly for students who are earnest in their academic efforts.

Conversely, students without learning difficulties experience anxiety mainly due to social distractions, unannounced tests, difficulties in understanding specific mathematical concepts, pressure to maintain high academic performance, and reliance on rote memorization. Disruptive behavior from peers during math lessons is a significant anxiety trigger, in line with findings by Dina & Ambarwati (2022), who identified disturbances in the learning environment as key factors aggravating mathematics anxiety. This study also notes that unannounced exams trigger anxiety, aligning with Puji Hartati (2024), who affirmed that unexpected evaluations significantly increase students' anxiety due to inadequate preparation and uncertainty.

Interestingly, reliance on ineffective learning strategies, particularly rote memorization without deep conceptual understanding, strongly emerged among students without learning difficulties. It is evident that inappropriate learning approaches lead to anxiety and reduce the effectiveness of mathematics education. This implies the need for specific classroom practices, such as reforming assessment methods; for instance, competency-based learning approaches may

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help alleviate mathematics anxiety (Fergus et al., 2022). Comparatively, this study enhances understanding by explicitly distinguishing between anxiety factors in students with and without learning difficulties, offering a nuanced perspective often overlooked in previous research. While earlier studies broadly categorized anxiety triggers, this research delineates practical contexts such as classroom noise and unannounced examinations, providing targeted insights into classroom management and pedagogical strategies.

So, this study extends previous findings by providing a detailed differentiation of mathematics anxiety factors, emphasizing the importance of tailored interventions that address the unique needs of each student group. Future research may further explore the longitudinal implications of these anxiety factors and assess the effectiveness of interventions, thereby significantly contributing to educational strategies aimed at reducing mathematics anxiety and improving learning outcomes.

#### CONCLUSION

Based on the analysis, it can be concluded that mathematics anxiety among junior high school students arises from multifaceted and interrelated factors that differ significantly between students with and without learning difficulties. For students with learning difficulties, anxiety is predominantly triggered by classroom disturbances, negative peer evaluations, incomplete homework, basic skill deficits, parental pressure, and ineffective learning strategies. Meanwhile, students without learning difficulties experience anxiety mainly due to social distractions, unexpected assessments, pressure to maintain high academic performance, conceptual difficulties, and reliance on rote memorization. These findings highlight the need for differentiated and contextspecific pedagogical interventions, emphasizing the importance of classroom management, appropriate assessment methods, and the promotion of meaningful learning strategies to mitigate mathematics anxiety and enhance students' academic performance.

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