

# Prevalence of Math Anxiety among Upper Secondary Students at a Private School in Suburban Kuala Lumpur

## *Kebimbangan Matematik Dari Kalangan Pelajar Menengah Atas di Sekolah Swasta di Pinggir Bandar Kuala Lumpur*

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### ABSTRACT

This study examined the prevalence of Math anxiety among upper secondary students at a suburban private school in Kuala Lumpur. It also aimed to establish whether students' Math anxiety would differ significantly by gender and level of study. The sample comprised 138 Form Four and Form Five students who filled out an online questionnaire containing nine (9) Likert-type statements suggesting fear and discomfort towards various aspects of learning Mathematics. The data were analysed descriptively using frequencies, percentages, means and standard deviations, as well as inferentially using independent samples t-tests. Overall, the study found that less than one-third of the respondents reported experiencing Math anxiety, while the remaining two-thirds did not indicate so or were uncertain. The patterns of responses suggest that most upper form students at the suburban private school are not affected by Math anxiety. The t-test results also produced no statistically significant effects of gender and level of study. Girls reported slightly higher levels of anxiety towards Mathematics than did boys, but the gender difference did not account for any statistical significance, while Form Four and Form Five students had very similar reports of anxiety. The study recommended amending the Likert categories utilized for assessing Math anxiety so that the measure would be a more accurate representation of its prevalence among student groups.

**Keywords:** Math anxiety, fear of Mathematics, learning of Mathematics, gender differences, suburban upper secondary students

### ABSTRAK

*Kajian ini mengkaji kebimbangan Matematik dari kalangan pelajar menengah atas di sekolah swasta pinggir bandar Kuala Lumpur. Ia juga bertujuan untuk menentukan samada kebimbangan Matematik dari kalangan pelajar berbeza mengikut jantina dan tahap pengajian. Sampel kajian ini terdiri daripada 138 pelajar Tingkatan 4 dan Tingkatan 5 yang telah menjawab soal selidik secara dalam talian. Soal selidik ini mengandungi sembilan (9) pernyataan jenis Likert yang menunjukkan rasa takut dan tidak selesa terhadap pelbagai aspek pembelajaran Matematik. Data dianalisis secara deskriptif menggunakan frekuensi, peratusan, min dan sisihan piawai, serta secara inferensi menggunakan ujian-t sampel bebas. Secara keseluruhannya, kajian ini mendapati bahawa*

*kurang satu pertiga daripada responden melaporkan kebimbangan Matematik, manakala dua pertiga lagi tidak mengalaminya atau tidak pasti. Corak respons menunjukkan bahawa kebanyakan pelajar menengah atas di sekolah swasta pinggir bandar tidak terjejas dengan kebimbangan Matematik. Keputusan ujian-t pula tidak menghasilkan kesan signifikan secara statistik terhadap jantina dan tahap pengajian. Responden perempuan melaporkan tahap kebimbangan Matematik yang lebih tinggi daripada lelaki, tetapi perbezaan ini tidak mengambil kira sebarang kepentingan statistik, manakala pelajar Tingkatan 4 dan 5 mengalami tahap kebimbangan Matematik yang hampir sama. Kajian ini mengesyorkan agar kategori Likert yang digunakan untuk menilai tahap kebimbangan Matematik diubah supaya ukurannya dapat memberi gambaran yang lebih tepat tentang kelaziman kebimbangan Matematik di kalangan pelajar menengah atas.*

**Kata Kunci:** *Kebimbangan Matematik, takut kepada subjek Matematik, pembelajaran Matematik, perbezaan jantina, pelajar menengah atas di sekolah pinggir bandar*

## **INTRODUCTION**

Mathematics by nature is a science of order and structure. It consists of relationships that evolved from the elemental practices of counting, measuring, and describing the shapes of objects. Mathematics forms the core of the science stream where students who wish to pursue highly scientific studies, like Physics and Chemistry, as their specialized fields must acquire a good mastery of Mathematics. Students cannot enroll and perform well in the science stream without having a good understanding of Mathematics because science subjects involve a lot of computations and mathematical reasoning. Global reports show that student interest in Science, Technology, Engineering and Mathematics (STEM) subjects, in particular science and mathematics, tends to decline with age and school year (Potvin, & Hasni, 2014). This means that the older students get and the more they are acquainted with science and mathematics, the less interested they are in the subjects. In other words, an inverse relationship can be assumed between students' exposure to STEM and their interest in the subjects. What can be the cause of this steady decline of student interest in STEM, especially in Mathematics?

Experts have attributed students' steady decline and lack of interest in STEM to too many theories being taught in the curriculum and to prevailing misconceptions towards STEM subjects. As a result, students tend to avoid the science stream which they perceive to contain subjects that require a lot of numerical analysis such as Physics and Chemistry. STEM subjects tend to give school students much fear and anxiety, a situation that is sometimes caused by their own misperceptions toward the subjects (Amirnudin & Salleh, 2020; Kennedy, Lyons, & Quinn, 2014). Students' fear and anxiety explain the major drop in their enrollment in the science stream and in mathematics subjects. The Ministry of Education Malaysia has targeted a 60:40 ratio of student enrolment in science to art, but in recent years, it has only been able to reach the ratio of 20:80. One of the factors leading to decreasing students' interest and intention to enroll in the Science stream is their fear of and anxiety towards mathematics. In particular, recent trends show that students tend to avoid studying Mathematics due to Math anxiety. To draw an analogy, Mathematics education is to a nation what protein is to a baby human, without which the baby human or nation cannot thrive and survive. Mathematics is a body of knowledge and skills needed to understand and apply science and technology. A strong foundation in Mathematics will influence a student's ability to pursue tertiary studies in the science stream, thus affecting the number of students enrolling in science.

## **PROBLEM STATEMENT**

Decreasing student enrolments in STEM and the science stream are alarming and should provoke the government to find out the root cause of this steady decline. In the midst of a rapidly growing digital industry, sudden drops in STEM enrollments among Malaysian students may cause the nation's pool of talents to continue to shrink although STEM-related positions create many emerging opportunities in the job market. If this decline persists, Malaysia will be left behind in technology and will have to keep importing expertise from other countries. In the long run, it will not even be able to compete with its regional neighbors, such as Thailand, Singapore, Indonesia and Vietnam, let alone globally with well-

developed economies such as the U.S. and Australia, in producing high quality human capital, goods and merchandise.

Much empirical research has documented notable gender differences in Math anxiety, with researchers consistently debating the link between Math anxiety and gender. Research results regarding this link have been mixed. In a number of surveys (e.g., Núñez-Peña et al., 2016; Morán-Soto & González-Peña; 2022), females reported higher levels of anxiety than males, although performing at a similar level in the subject as their male counterparts. In others, no gender differences in Math anxiety were observed (e.g Erturan & Jansen, 2015; Kundu & Kar, 2018; Puteh & Khalin, 2016; Muhammad, 2017; Amam et al., 2019; Szczygiel, 2020). In these works, no significant differences in anxiety towards Mathematics between male and female students were recorded.

Previous studies have produced inconsistent results regarding age differences in the anxiety. Gierl and Bisanz, (1995) suggested that in the early grades, significant differences in the math anxiety experienced by all students cannot be clearly observed. This result is consistent with that reported by Si, Li, Sun, Xu, & Sun, (2016) which confirmed that the interaction between age group and Math anxiety was not significant. On the other hand, Erdem (2017) reported that Math anxiety among students tends to decrease over the years of their education, suggesting that the more familiar students get with the numbers, the less likely they will be fearful of them. Erdem concluded that no clear conclusion could be made regarding the link between age and Math anxiety level. Besides, Kuppusamy and Musa (2021) revealed that gender does not influence students' attitude towards learning mathematics, but the different age groups did.

Where Malaysia is concerned, an astounding 59.26% suffered from Math anxiety (Amirnudin et al., 2018). However, contrary to the figures reported, the Math anxiety level among secondary school students in Selangor was moderate and not alarming (Zakaria, Zain, Ahmad, & Erlina, 2012; Ching Pengh & Rosli, 2021). Although many studies have been done to assess students' anxiety towards Mathematics (Yahya & Amir, 2018; Hasrin & Maat, 2022), very few have explored its prevalence among students at private secondary schools in Malaysia (Puteh, & Khalin, 2006). Given the importance of understanding Math anxiety and how it can affect student interest, enrolment and performance in the subject and STEM fields, this study aimed to investigate its prevalence among a sample of upper secondary school students from a private school in suburban Kuala Lumpur.

## **RESEARCH OBJECTIVE**

The objectives of the present study are:

1. To investigate the prevalence of Math anxiety among upper secondary students at a selected private school in suburban Kuala Lumpur.
2. To establish whether students' Math anxiety differs significantly by gender and level of study.

## **METHODOLOGY**

### **Research Design**

The present study was conducted quantitatively using cross-sectional survey, focusing on the prevalence of anxiety in learning Mathematics among upper secondary school students from a private school in suburban Kuala Lumpur.

### **Population and Sample**

The target population comprises those upper secondary students studying in Form Four and Form Five at the selected private school located in Gombak, a suburban area in Kuala Lumpur. The private school has a total enrolment of 504 students from 21 classes. The target population is 208 students in the upper forms, aged 16 to 17 years, with roughly 53% boys and 47% girls. Their breakdown by form and gender is shown in Table 1.

**Table 1:** Breakdown of the Target Population by Form and Gender

Form	Male	Female	Total	% of Representation
Form 4	55	54	109	52.4%
Form 5	56	43	99	47.6%
Total	111	97	208	100%
% of Representation	53.4%	46.6%	100%	

The respondents were selected from this student population pool as the upper forms are regarded mature enough to respond to the questionnaire items on Math anxiety, hence providing the study with reliable data on its prevalence among secondary school students. The sample size was determined by setting the margin of error at 5% and level of confidence at 95%, giving the study a recommended minimum sample of 138. All of the respondents were Malay Muslim students between 16 and 17 years old, coming from various affluent backgrounds. The specific breakdown of the sample by gender and level of study is given in Table 2.

**Table 2:** Demographic Profile of the Respondents (N = 138)

Demography	Frequency	Percentage
Gender		
▪ Male	78	57.0
▪ Female	60	43.0
Form		
▪ Four	69	50.0
▪ Five	69	50.0

### Sampling Procedure

A stratified quota sampling, which is a non-probability type of sampling, was used to derive the sample from the population. As indicated in Table 1, the population comprises approximately 53% boys and 47% girls, and 52% Form Four and 48% Form Five students. These percentages, therefore, should be represented in the sample to be drawn for the study. The non-probability method of quota sampling was chosen because the researcher intended to compare the prevalence of Math anxiety by gender and form in a sample whose characteristics should closely resemble those of the population. A two-level stratification was used as the sample had to be divided according to gender and form to approximate the population according to these two characteristics. The purpose was to enable justifiable comparisons to be made to address research questions two and three. Thus, stratified quota sampling was the most appropriate sampling method to derive the sample.

The first procedure in this sampling method was to identify the minimum sample required (N = 138) and then break it down into two strata, i.e., gender and form. Next, the researcher identified the proportion of all sub-groups that should be represented in the sample. The process is visually illustrated in Figure 1, which showed a good 66.3% representative of the total population of the private school's upper secondary students. The sample composition by gender and level of study approximated the quotas earlier set in the study's stratified quota sampling, which should be 53% boys and 47% girls, and 52% Form Four and 48% Form Five students.

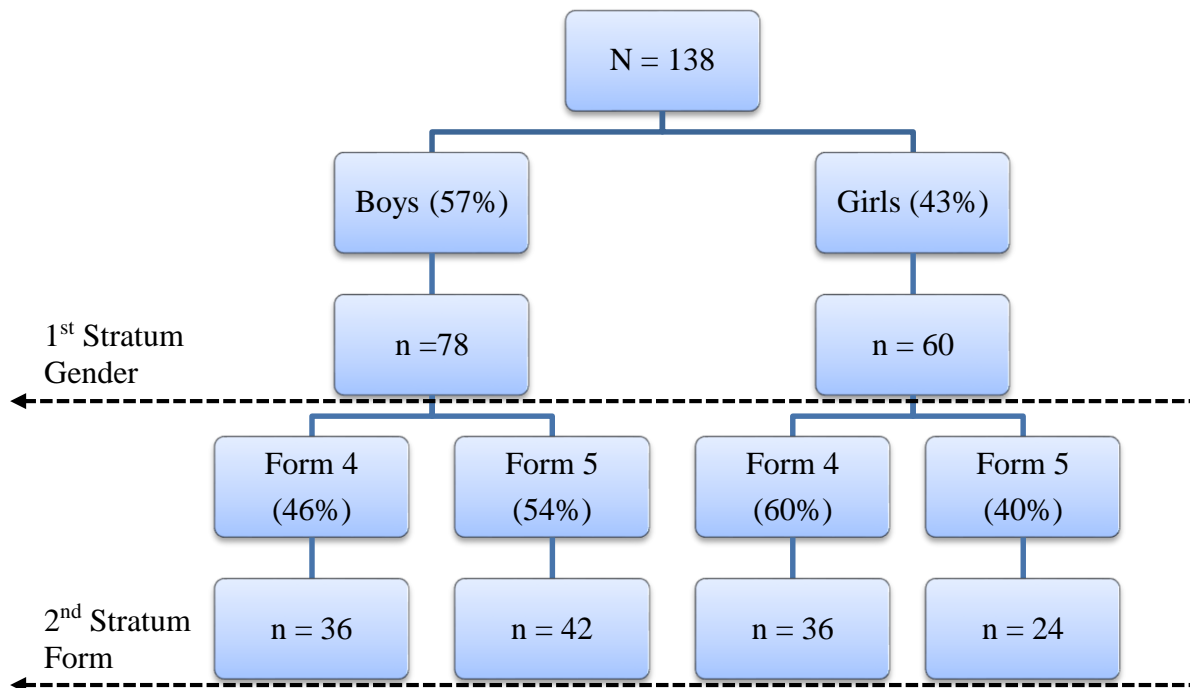


Figure 1: Stratified Quota Sampling

### Instrument

The instrument used in the study was a Math Anxiety Likert questionnaire (referred to henceforth as the MAQ) that comprised two parts. The first part consisted of four (4) demographic items on gender, race, nationality, and age. The second part comprised nine (9) items that assessed students' Math anxiety on a 5-point Likert scale, consisting of Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). The items were improvised from the Attitudes Toward Mathematics Inventory (ATMI), which was designed to measure high school and college students' attitudes toward mathematics. The ATMI was first developed by Martha Tapia in 1996. The MAQ used in this study took nine (9) questions from the ATMI that concentrated on Math learning anxiety (Table 3).

Table 3: Math Anxiety Items Taken from the ATMI Survey (Tapia (1996))

No.	Item
1.	Mathematics is one of my most dreaded subjects.
2.	My mind goes blank and I am unable to think clearly when working with mathematics.
3.	Studying mathematics makes me feel nervous.
4.	Mathematics makes me feel uncomfortable.
5.	I am always under a terrible strain in a Math class.
6.	When I hear the word mathematics, I have a feeling of dislike.
7.	It makes me nervous to even think about having to do a mathematics problem.
8.	I am always confused in my Mathematics class.
9.	I feel a sense of insecurity when attempting mathematics

The MAQ items which were adopted from Tapia (1996) were chosen as they have been used many times in previous research. They are assumed to have content validity and internal consistency, with the Cronbach's alpha coefficients for the overall scale of ATMI was 0.963. In addition, what the items

measured was in alignment with the operational definition of Math anxiety as assessed in this study. The 9-item MAQ was converted into a Google Form by the researcher to enable the survey to be conducted online.

### **Data Collection Procedures**

The formal procedures and protocol for collecting data were closely adhered to before running the survey. First, the researcher requested the permission to conduct the study from the principal of the school. Second, after the permission was obtained, the researcher distributed the survey form online via Google Form to the target sample of 136 Form Four and Five students. The researcher explained to the students how to answer the survey form properly, ensuring the students that their responses would be strictly confidential. Finally, once the respondents completed the survey questions, the researcher checked the data file in Excel to ensure that all sections were fully filled out. A follow-up communication was then established with non-responding students to increase the response rate and obtain the target minimum sample of 138 respondents.

### **Data Inspection**

From the respondents' responses via Google Form, the data were collated in a Google Sheet and then downloaded as a Microsoft Excel workbook. The data were imported into the Statistical Package for Social Sciences or SPSS (version 26) and analyzed using two types of statistical analysis, namely descriptive and inferential statistics. Prior to running the analysis, they were assessed to identify the presence of any form of error, abnormality, or missing values. The minimum and maximum values for each response were checked, but since the survey was conducted with Google Form, no errors were detected, and no value was found to fall outside the 5-point Likert range. Therefore, this set of data on Math anxiety was free from error. After the final check, the data were imported into SPSS, and the timestamp was changed and replaced with the respondents' ID.

### ***Descriptive Statistics***

In the descriptive analysis, frequency counts, means, standard deviations and percentage distributions were employed to establish the prevalence of Math anxiety among upper secondary school students. To enable the analysis to see clear patterns in students' Math anxiety, the researcher collapsed the two categories of agreement (i.e., *Agree* and *Strongly Agree*) into a single percentage of response, and the two categories of disagreement (i.e., *Disagree* and *Strongly Disagree*) into another percentage, leaving the responses in just three categories for the analysis.

### ***Independent Samples t-Test***

The nine MAQ items were summated into scores that represented students' Math anxiety. Mean differences were computed for each group (i.e., gender and form) to ascertain if the differences were statistically significant at  $\alpha = \leq .05$ . If the mean difference accounted for a  $p$  value of less than .05, then the result was regarded as statistically significant. This t-test analysis was used to address on whether the respondents' Math anxiety differed by gender and level of study.

## **RESULTS**

### Prevalence of Students' Mathematics Anxiety

The data for this construct was derived by summing students' scores on the nine (9) MAQ items. Descriptive statistics (i.e., means, frequencies, percentages, and standard deviations) were summarized to describe the pattern in the respondents' responses to the nine items suggesting the presence of Math anxiety in them. The results of the analysis showing three categories of responses (i.e., Agree, Disagree and Neutral) are presented in Table 5.

**Table 5:** Upper Secondary Students' Mathematics Anxiety (N= 138)

Item	Response Categories			M	STD
	SA & A	NS	D & SD		
1. Mathematics is one of my most dreaded subjects.	43 (31.2)	57 (41.3)	38 (27.5)	3.00	1.046
2. My mind goes blank and I am unable to think clearly when working with mathematics.	42 (30.4)	45 (32.6)	51 (37)	2.90	1.103
3. Studying mathematics makes me feel nervous.	37 (26.8)	44 (31.9)	57 (41.3)	2.74	1.109
4. Mathematics makes me feel uncomfortable.	20 (14.5)	43 (31.2)	75 (54.3)	2.42	1.107
5. I am always under a terrible strain in a Math class.	32 (23.2)	44 (31.9)	62 (44.9)	2.68	1.074
6. When I hear the word mathematics, I have a feeling of dislike.	31 (22.5)	37 (26.8)	70 (50.7)	2.48	1.204
7. It makes me nervous to even think about having to do a mathematics problem.	39 (28.3)	43 (31.2)	56 (40.5)	2.83	1.169
8. I am always confused in my Mathematics class.	39 (28.3)	50 (36.2)	49 (33.3)	2.90	1.096
9. I feel a sense of insecurity when attempting mathematics	49 (35.5)	42 (30.4)	47 (34.1)	3.07	1.227
Average Mean				2.78	

Notes: SA = Strongly Agree; A = Agree; NS = Not Sure; D = Disagree; SD = Strongly Disagree; STD = Standard Deviation

The distribution of responses from this sample of upper secondary school students shows that reportedly, Math anxiety only affected less than one third of the sample. The prevalence of the anxiety is not alarming because less than 15% of the sample said that they were uncomfortable with Mathematics (14.5%) as shown the responses to Item 4 of the questionnaire, and only one item (Item 9) recorded more than one-third of the sample's agreement that they felt insecure when attempting Mathematics (35.5%). However, the remaining eight (8) items recorded less than 33% agreement from the respondents on the suggestion that they experienced Math anxiety. The average mean value for the construct was less than 3, which indicates that a majority of the respondents either disagreed or were uncertain that they felt an anxiety when working or dealing with Mathematics.

### Gender Differences in Mathematics Anxiety

An independent samples t-test was performed on the Math anxiety data involving 138 upper secondary school students. The results indicated that there was no significant effect of gender on Math anxiety,  $t(136) = .714, p = .067$ , despite the girls ( $M = 26.37, SD = 7.69$ ) reporting higher math anxiety scores than the boys ( $M = 23.97, SD = 7.44$ ). The 2.39-point difference between the boys and girls did not account for any statistically significant difference.

### Differences in Mathematics Anxiety by Level of Study

Results of the independent samples t-test performed on the Math anxiety data of 138 upper secondary students, also produced no significant effect of level of study on students' reported anxiety,  $t(136) = .714, p = .476$ . Both Form Four ( $M = 25.48, SD = 8.11$ ) and Form Five ( $M = 24.55, SD = 7.11$ ) students reported very close Math anxiety scores. The 0.93-point difference between the two forms did not appear to be statistically significant and the anxiety gap between them is almost non-existent.

## **DISCUSSION**

### **Prevalence of Math Anxiety among Malaysian Upper Secondary Students**

The results show that Math anxiety was not widespread among the upper secondary suburban school students surveyed in the study as just about one-third of the sample reported feeling nervous, uncomfortable, and anxious about various aspects of their Mathematics learning. Those that clearly expressed a discomfort with the subject constituted only 15%, suggesting that the anxiety is not prevalent. This finding is consistent with many previous local studies, such as Zakaria et al. (2012), Ching Peng and Rosli (2021), and Bidin et al. (2003), who documented that the Math anxiety level of secondary school students in Selangor and Perlis, respectively, was moderate, meaning that it was not alarmingly prevalent and high. The prevalence is also less than that reported by Devine et al. (2018), who found the anxiety to affect about 22% of the sample, and by Kucian et al. (2018) who reported a 25% prevalence.

However, it should be noted that about 36% reported feeling insecure when attempting Mathematics, a figure that the school and Math teachers involved should be concerned about as this will affect students' ability to do well in the subject. This figure is in line with the anxiety figures reported by Brewster and Miller (2020) (that is, 33% of 15-year-olds they surveyed suffered from Math anxiety); Luttenberger et al. (2018) (who suggested that more than half of their sample of students rated Math classes as difficult); and Amirnudin et al. (2018) (who found similar results that Math anxiety was experienced by the majority of Malaysian students). The result is also consistent with Beilock and Willingham (2014) involving college students in the United States.

### **Gender Differences in Math Anxiety**

Although the girls' mean anxiety score was approximately 3 points higher than that of the boys, which suggested a slightly higher Math anxiety for females, however, no statistically significant difference was observed. This discovery is consistent with Birgin et al. (2010); Erturan and Jansen (2015); Kundu and Kar (2018); Bhowmik and Banerjee (2015); Puteh and Khalin (2016); Muhammad (2017), Amam et al. (2019), Shamsuddin et al. (2021) and Szczygiel (2020), which reported no significant differences in the patterns of male and female responses to the MAQ, indicating that they were responding to the items in similar ways. Both genders also did not differ in their reports of math worry, indicating that they were equally concerned about doing well in mathematics. The reason why gender differences in Math anxiety were not significant could be due to the narrowing gap in male-female Math ability, resulting in similar levels of anxiety being reported (Kucian et al., 2018). On the other hand, what the study discovered did not support the results of Chinn (2009), Devine et al. (2012), and Else-Quest et al. (2010), all of which reported female students perceiving higher levels of Math anxiety, thus putting them at a disadvantage for Math learning.

### **Differences in Math Anxiety by Level of Study**

The results yielded in this study pointed to a very minimal, almost non-existing gap in students' Math anxiety by age and level of study. Younger students in Form Four reported similar levels of anxiety as did their seniors in Form Five. The difference was so slight that it did not account for any statistical significance. The pattern is consistent with that found by Gierl and Bisanz, (1995), Oguguo (2011), Si et al. (2016), Erdem (2017), Şahin (2008) and Ramirez et al. (2013), all of which discovered no



significant difference in the Math anxiety experienced by students at various grade levels. The result obtained in this study was expected as the students in both forms are of the same upper secondary level with an age difference of only 1 year. This explains why the Math anxiety gap between them is almost non-existent.

## LIMITATIONS OF THE STUDY

The analysis found one important limitation in the study's assessment of Math anxiety that had rendered the results rather inconclusive. It was discovered that significant numbers of the respondents had selected *Not Sure* or *Neutral* for the items asked, making the data not fully usable for establishing the real extent of Math anxiety in the sample of secondary school students. Large percentages of the respondents hovered in the middle and did not give a specific indication of where they were in terms of being anxious about Math learning. In fact, for one item, the percentage of uncertainty or neutrality was a high 41%. Such responses are not beneficial for research that is looking to find definitive and conclusive results. Another limitation was the study's oversight in examining the relationship between anxiety and performance in Mathematics. It could be that for some students, the higher the anxiety, the better the performance. However, this association failed to be examined in the study.

Based on the limitations, the researcher proposed the following recommendations to guide future research into Math anxiety:

### 1. Exclude "Not Sure" or "Neutral" from the Response Categories

Future assessments of Math anxiety among students should "force" the respondents to submit a clear, definite answer to every item. Therefore, research instruments should exclude *Not Sure* or *Neutral* from their response categories so that the results can be fully utilized to make well-grounded decisions and conclusions about the prevalence of Math anxiety among school students.

### 2. Examine the Association between Anxiety and Performance in Math

This is a critical link that should be investigated in future research. We need to understand the association between anxiety and performance that concerns Math learning—that is, whether anxiety results in decreased or increased Math performance among students. This link must be empirically supported by research findings to inform future interventions aimed at helping students learn and perform better in Math.

### 3. Compare Math Anxiety Across Student Levels and Categories

This study also proposes that future research look into Math anxiety across multiple student level and categories—such as between upper and lower secondary school students, and rural and urban students—to identify whether certain demographic variables and personal factors exercise an influence on the experience of Math anxiety. Extending the research to public and vernacular schools should also shed light on whether school culture and environment play a role in affecting Math discomfort levels among students.

### 4. Identify the Root Causes of Math Anxiety

As educators, we need to identify and understand the causes of Math anxiety that affect students, such as poor Math instruction, negative attitudes toward the subject, negative Math learning experiences, lack of parental support, misperceptions about future careers in Math and low self-esteem. This understanding will guide us in helping students cope with their anxiety as well as with these factors.

## IMPLICATION

The results of this study will be used as a reference material to understand the prevalence of Math anxiety among school students. Based on the results obtained, teachers and school administrators can rectify the situation by producing an action plan with effective corrective and preventive actions to motivate students, and also probe into new teaching methods that can make students feel at ease with numbers, figures, formulas and computations. To add to that, the results of this study will also help the school management in preparing teachers to identify the root causes of Math anxiety and address them systematically so that students can be helped to perform better in Mathematics.

## CONCLUSION

This study has successfully addressed the concern and question of how prevalent Math anxiety is among upper secondary school students, the answer being that it is not widespread and appears to affect less than one-third of the sample surveyed. If the sample was an accurate representation of the target population, it could then be said that less than one-third of the population of upper secondary students would likely agree that they have Math anxiety. Although it is not widespread as earlier anticipated, actions must still be taken by the school, the Ministry of Education and Mathematics teachers to help those upper secondary students who agreed that they had a fear of numbers. Teachers can perhaps look into more innovative methods of teaching Mathematics, such as contextualized instruction, inquiry-based learning and problem-based learning, to make numbers less daunting and more meaningful to students. Addressing the issue of the fear of Math right at the root cause may be the answer to solving the problem of declining Math interest and performance among Malaysian upper secondary students.

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