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Exploring Anxiety Levels in Mathematics and Gender Dispositions among Students in Secondary School

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ABSTRACT

The research purpose of this study is to (1) explores students' levels of nervousness in mathematics among students in secondary school. (2) Investigate the connection among female and male students' mathematics nervousness or anxiety levels. The study design was a correlation. The study sample comprised 300 students which include female and male students in secondary from five schools. The instruments that were utilized for data collection were the questionnaire and the students' third-term mathematics results. The hypotheses stated to guide the research were two. The multiple regressions, bar chart and pie chart were utilized to analyze collected data. The result from the study indicated that there exists a significant connection between students' math level of anxiety or nervousness and their mathematics performance. It was revealed that significant difference exists between anxiety in math and gender among students in secondary school. The study's findings have impacted the insight of students' levels of anxiety in math and gender disposition among students in secondary school. This research recommends that if performance of students in mathematics is to be enhanced there is demand to control the student's anxiety' levels and also there should be no gender discrimination

Keywords: anxiety level, mathematics, gender, students

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1. INTRODUCTION

Many researchers have explained mathematics as an essential means to the progress and growth of any country, for the truth that its skills and knowledge are the bases for technology and science and the bedrock for societal transformation (Onoshakpokaiye, 2020). Individuals know how critical Mathematics is in their lives. Math can be viewed as among the foundations that built human development. No one can succeed on earth without using mathematics; it is a vital tool for all disciplines like Engineering, sciences, industries, business, and so forth and also vital for the development and advancement of all nations (Onoshakpokaiye, 2021, Reyes & Castillo, 2015). The acquisition of adequate numerical and math abilities is necessary for daily functioning, which also play a major role on participation in and progress in various professions, especially in the areas of science, technology, engineering, mathematics (STEM) (Ferguson, Maloney, Fugelsang, & Risko, 2015; Beilock & Maloney, 2015; Van Mier, Schleepen, & Van den Berg, 2019). Studies have shown that nations with an established math literacy rate, especially: the United States, Japan, Singapore, and China developed both economical and technologically when contrasted with their underdeveloped nation partners. This truth sometimes neglected and customarily overlooked even by teachers and educational program organizers in many developing nations such as Nigeria. However, in Nigerian education schools, one cannot deny how yearly the educational institutions across the country are producing mathematically unequipped students. While the government is struggling to redeem its honour in the global community, students' results are still very poor.

Furthermore, the results of West African Examination Council (WAEC) in the last five years showed how poor the students' performance in Mathematics is compared to other subjects. Some possible factors envisage to be real causes of this poor performance include difficulty in understanding math concepts, study habits, absence of motivation, congested curriculum in Math, fragile students' foundations

in the fundamental skills, non availability of suitable school facilities, bad attitudes and stereotypes of the teaching strategies and the approaches in mathematical concepts introduced to students. Another problem that is adversely affecting students' performance all over the world is math anxiety. The investigation of anxiety or nervousness in math begins as soon in 1950s when Fides Gough Mary initiated the word mathema phobia to portray the phobia-like students' sensations toward mathematics (Suárez-Pellicioni, Núñez-Peña & Colomé, 2016).

Anxiety is described as tension, stress, strain, or bewilderment in a person's body and mind (Garba et al, 2020). .The anxiety type that falls under a specific phobia is mathematics anxiety. It can start from the basic school (Garba et al, 2020), and similar to other anxiety, individuals tend to steer clear of the problem as it may make them feel terrified and fearful (Calmclinic, 2017). Anxiety in Math has already been in existence a long time ago before it was noticed and studied. Anxiety in Math can also be referred to as math phobia; worry about ability of someone to perform in mathematics. Numerous students are nervous about mathematical tasks as result of their math performances. An issue in the field of education has long been raised concerning math anxiety (MA), the sensation of tension, fear and dread that some students experience when taking part in math (Zhang, Zhao & Kong, 2019).

Most students are doubtful about their math abilities and they regard it as the most frightful subject as result they became anxious. Different variables can bring anxiety or nervousness in math like as self-efficacy, low self-concepts, low self-esteem or students' unfavourable experience in mathematics. Anxiety in Math can be measured by utilizing different scales which can assist the teachers in effectively teaching the students. There is an enormous effect from beliefs, gender and culture. Math has been improved enormously in schools throughout the long term, and it will remain relevance.

LITERATURE REVIEW

Concept of anxiety or tension in math

There has been lot of studies on anxiety in math, which led to different definitions (Stoehr, 2017). Math tension or anxiety in math is describes sensation of worry when a student is experiencing issues in solving problems in mathematics. According to several studies, including those by Gunderson et al (2018), Zhang, Zhao and Kong (2019), this phenomenon affects elementary schools students to colleges quite frequently. The primary cause of worry or stress in math, according to Mann and Walshaw(2019), is concern about evaluation. This is so that teachers may better support children who suffer math anxiety. Students who struggle with math tension or anxiety usually possess a negative expectation regarding evaluation. Anxiety in math or tension is a well-known sort of anxiety amongst the different kinds of tension or anxiety which happens among students (Wern, Choo & Sook, 2015, Onoshakpokaiye, 2023). Math anxiety is the ordinary kind of psychological sickness among students that can impact the mental, physical, and students' emotions that are linked with math reasoning.

This is the sensation of nervousness and uneasiness when people have disrupted math control and numerical critical thinking in normal and learning situations. According to Mutlu (2019) it is the feelings of worry and unease that impede the mathematical problem-solving and numbers operation in various ways in academic settings and normal life. It is math nervousness and emotional negative feedback to mathematics. Around 20% of the population displays math tension or anxiety, a more or less substantial unpleasant affective reaction, in circumstances involving calculation and activities in mathematics (Van Mier, Schleepen & Van den Berg, 2019).

When an individual experiences or feels tension and worry, it can disturb the individual capability to manipulate numbers and solve mathematics problems both in everyday and academic situations. This can result to forgetfulness and absence of self confidence in themselves (Garba et al, 2020). Whenever dealing with problems in math, it has a negative impact on the individual and causes stress (Garba et al, 2020; Lindskog, Winman, & Poom, 2017). According to Escalera-Chávez et al (2017), mathematics tension is a kind of stress brought on by having to finish a mathematical activity. it appears as feelings of stress, dread, fear, and worry. The three kinds of symptoms that are typically linked to mathematics nervousness or anxiety comprises cognitive, physical and emotional symptoms, according to past study on the subject.

The physical signs can be viewed as those signs like nail biting, trouble breathing, and perspiration. The most prevalent symptoms, however, are that of emotion.

Math tension is the sensation of worry and nervousness when students experience solving of mathematics problem and numbers manipulation during academic situations (Wern, Choo & Sook, 2015). Students experiencing anxiety in math will possess a sense of unease when partaking in mathematical problems where their self-worth is frightening and therefore result in a negative disposition in mathematics (Wern, Choo & Sook, 2015). Math anxiety signs can be grouped into three types, the behavioural, physical and psychological. In the aspect of physical signs, students experience sweating hands and increased heartbeat. For Psychological symptoms, it is difficult for the students to focus or concentrate during math class or lessons, while the behavioural symptoms are students' evasion of mathematics lessons (Wern, Choo & Sook, 2015). Students possess math anxiety due to painful or unfavourable past math experiences, a negative belief about math, and self-doubt about math subject, teachers' attitudes and teaching strategies.

The main reason students possess math anxiety or tension can be categorized into two; environmental variables and dispositional situational. The environmental factors occur due to the experience of students in mathematics, their age and mathematics course (Wern, Choo & Sook, 2015). Dispositional situational entails the feelings of students about mathematics. There are further reasons for students having mathematics tension or anxiety this can be because of the students' biased treatment as regards their race or gender, teachers' unwillingness to teach and explain to students whenever they encounter difficulties or problems in math.

The effects of anxiety related to math

Students who experienced math nervousness or anxiety usually have the sensation of distress when tackling mathematics assignments where their confidence is being compromised and hence resulting in having a negative mathematics disposition. Students are having mathematics anxiety because they have awkward previous math experiences. Students who possess math anxiety cannot achieve to their maximum capacity as result of intruding anxiety symptoms (Beilock, & Willingham, 2014).

Math nervousness or anxiety has unfavourable impact on people. Students who experience it lack confidence in mathematics abilities which have an unfavourable effect on their career possibilities. According to statistics, most of students who choose STEM majors-Science, Technology, Mathematics, and Engineering,-underperform because they think that math is a complex subject. Hence, these negative beliefs have an effect on students' interest in mathematics, which raises mathematics anxiety (Musa & Maat, 2021). In past studies, the main area of focus of study on the math tension or anxiety was the impact of math tension or nervousness on the performance or accomplishments of students' mathematics

According to multiple researches, higher math tension or anxiety levels have been connected with lower test scores in math achievement, fewer math courses taken, lower math course grades, and avoiding particular careers involving mathematics (Van Mier, Schleepen & Van den Berg, 2019). Simple math tasks might make some people feel anxious when working under pressure (Caviola et al, 2017). As activities get harder, math anxiety might also get worse (Van Mier, Schleepen & Van den Berg, 2019). Despite that this association has been thoroughly investigated in adults and teenagers, little study has been carried out on the connection between math tension or anxiety and arithmetic achievement of children in elementary school (Ganley & McGraw, 2016). Several empirical investigations have discovered a connection between math nervousness or anxiety and poor performance, suggesting that those with MA would struggle to do better when it involves arithmetic reasoning or solving math issues. It is crucial to do a systematic study so as to comprehend the connection between math performance and anxiety.

According to numerous research (Al-Shannaq & Leppayirta, 2020, Artemenko, Daroczy & Nuerk, 2015), mathematics anxiety or tension has an unfavourable effect on students' performance and the subject progress. Researchers are unsure of whether high anxiety causes low math achievement or if high anxiety is because of poor math achievement (Al-Shannaq & Leppayirta, 2020). Many behavioural, psychological, and physical signs of arithmetic anxiety might impair a student's capability to perform math problems. Many times, it is understood that the significant negative connection between elevated levels of nervousness or anxiety in arithmetic and poor achievement is a result of math's tension or anxiety influence on working

memory, which has a finite capacity. A greater part of this capability is committed to critical thinking or problem-solving while tackling mathematical tasks. But, in people who fight with math tension anxiety, an important portion of this space is taken up by anxiety, nervousness and fear which has an influence on the person's performance.

According to Program for International Student Assessment (PISA, 2012) study, students who feel arithmetic anxiety high levels do worse in math than their less anxious counterparts. Also, the research by Cargnelutti, Tomasetto, and Passolunghi (2017) indicated that the influence of math tension or anxiety related to math performance grew with time because of the build-up of math experience or other variables as a child grows up. These findings advocate that there exist a clear connection between math tension or anxiety and lower achievement levels and that decreasing math anxiety or nervousness could cause a noticeable improvement in students' performance.

Studies by Ramirez et al. (2018) and Foley, et al, (2017) show a connection between elevated levels of math nervousness and poor performance in math.

The disorder is brought on by math tension or anxiety, which impairs kids' mathematical skills (Ramirez et al, 2018). This impedes with the student's learning process and demotivates, unsatisfied, and discourages them. Due to this, the student's enthusiasm in mathematics wanes, which triggers behaviour associated to math evasion (Passolunghi & Mammarella, 2016, Murphy, 2018, Mutodi & Ngirande, 2014). If the issues associated to math fear are not appropriately addressed, fewer students will choose to study mathematics at higher education institutions (Musa & Maat, 2021). It is vital to recognize the math tension or anxiety problem, especially at the commencement of active learning, so as to prevent negative consequences later on and to simultaneously overcome math anxiety through a recovery approach and early intervention (Escalera-Chávez et al, 2017).

Anxiety related math and gender

The comparison of differences between genders in mathematical aptitude is among the studies that researchers usually look into. Different studies have signified that the connection between math tension and scholastic accomplishment or performance may be influenced by gender. Since the conclusions were conflicting, it had initially been theorized that gender affects math anxiety. It is imperative to investigate how gender affects the connection among Math performance and anxiety in light of these contradictory findings. Along with influencing learning, the evaluation also affects math anxiety. Studies examining the distinction between gender disparities in standardized test performance across various nations have been studied. Beller and Gafni study cited in Wern, Choo and Sook(2015) indicated that youngsters around nine years old do not exhibit predictable gender differences comparable to math abilities. Besides, mathematics is in many cases considered as a manly capability or male subject thus; females frequently have low trust in their math abilities.

For the reason that confidence has an effect on how well someone performs on math standardized tests, these sex stereotypes can cause women to have poor confidence in themselves and experience math tension or anxiety. Teachers have therefore been working to counteract this generalization by developing math confidence in every student to avoid worrying about math. Women have substantially higher MA than males do, according to numerous studies (Gunderson et al., 2018). For instance, Maloney et al (2012) proposed that women may have a greater MA than men in relation to tasks demanding numerical and mathematical skills. Despite earlier research's claims to the contrary, girls did not perform at a greater degree of MA than men throughout arithmetic topic study or a math content test (Goetz et al, 2013). The bulk of research (Ferguson et al., 2015; Jansen, Schmitz & van der Maas, 2016) examining gender disparities in adults found that women reported to possess higher arithmetic anxiety levels than men. According to studies conducted on junior and senior students in high school, females were more likely than boys to express feeling nervous about math (Hill et al, 2016, Van Mier, Schleepen, & Van den Berg, 2019).

Tests trigger more prominent tension in females contrasted with the males, yet they feel the same degree of nervousness learning math. Nonetheless, male and female students' degrees of anxiety vary. Many studies were done to look at the connection between anxiety and gender, but there are still no results (Ajogbeje et al, 2013). A study was conducted out by Kawakami et al (2008) to examine the math students'

attitudes and their behaviour during math examinations. They also looked into the impacts of prolonged instruction on the aptitude of women for math. Results revealed that women who were willing to involve themselves in math rather than evade it had a good attitude about it. This research was repeated with female participants who either received neutral training or were encouraged to pursue math. The results were expected and revealed that woman who were educated about how to tackle arithmetic had an upbeat outlook and finished more math tasks than women who were educated on the methods for tackly math neutrally.

Johns, Schmader, and Martens (2005) claimed that teaching stereotype danger may have a detrimental influence on how well women perform in math. According to their research, it was shown that when math tasks problems were presented as math equations, women would typically do poorer than men. Nevertheless, when the test was described as a problem-solving exercise or when participants were exposed to risks posed by stereotypes, there was no distinction between women and men. The findings suggested that educating students about stereotype threat could offer a practical method for reducing its negative effects, which will improve the math abilities and performance of women. This led the researchers to hypothesize that educating female educators about stereotype danger can lessen its unfavourable effects. Students' levels of anxiousness might have a negative effect on how they will perform.

Gender is among the variables that make students anxious, according to previous studies. According to certain data, there exist a substantial link between math fear and gender (Ajogbeje et al, 2013). Females have a tendency to lack confidence and have bad perceptions of math that makes them shun math-related work. Although males are believed to be genuinely engaged in arithmetic tasks, girls' math learning may likely be impaired and also increase their anxiety level (Wern, Choo & Sook, 2015). However, research exposed that there exist no discernible connection between math fear and gender (Ozgur, 2014).

Previous researches pointed out that students' performance is impacted negatively over time by math fear. Children that struggle with math tension or anxiety appear to like learning the subject less and have low self-esteem in connection with their mathematical prowess. Math anxiety tension levels and arithmetic aptitude were examined in a longitudinal research of boys and girls in grades 7 through 12 (Ma & Xu, 2004). Girls showed arithmetic worry from middle school to high school, In line with the authors' research, because their stability impact of math anxiety was much bigger than those for boys. Research demonstrates that, regardless of math aptitude, girls who experience arithmetic anxiety or tension during the first years are more prone to keep doing so after high school. There are no gender differences in math anxiety ratings, according to studies by Erturan and Jansen (2015), Schleepen and Van Mier (2016), Kucian et al. (2018) among others. In late elementary and secondary school, few research have been done on the gender disparity in the link between math nervousness and performance but those that have demonstrated that relationship only hold true for female students (Erturan & Jansen, 2015; Schleepen & Van Mier, 2016).

For grade levels 3 through 5, where the mean age was 9:5, Hill et al (2016) discovered an important connection in females though not in males. In conclusion, despite the reality that there isn’t many or any gender disparity in the math performance, females seem to possess more math anxiety tor tension than boys do. The connection between Math anxiety and performance is commonly revealed to be very poor (Van Mier, Schleepen, & Van den Berg, 2019). More recent research has examined how arithmetic performance is impacted by a dread of math. A person who experiences math tension may not necessarily be less talented regarding the subject math; rather, the signs of their anxiety limit their capacity to function at their highest level.

Different physical, behavioral and psychological indications of math nervousness or anxiety might impair performance of student in mathematics (Beilock & Willingham, 2014). It is generally accepted that the substantial inverse relationship between math anxiety and subpar performance is caused by math anxiety's impact on memory recall. There is a limited amount of room in working memory. Problem solving takes up a large space of this capability when performing mathematical tasks. Consequently, arithmetic anxiety patients perform worse since their anxious thoughts take up a great deal of this area. Due to a significant reliance on timed, high-stakes exams, when these students experience the most tension or anxiety, students with math tension or anxiety may do poorly in class.

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2. RESEARCH METHOD

The research design study is a correlation. Correlation research entails data collection of a particular population and determining the relationship that exists among the variables of concern. The study's goal is to ascertain how senior secondary schools students in Ethiope local government area, Delta State, Nigeria, feel about mathematics and how this feeling varies by gender. The study population comprises 1,000 senior secondary school students. A sample of 300 comprises 160 female and 140 male students were selected through random sampling. The instruments utilized for collection of data were the questionnaire and the students' third-term mathematics results. The questionnaire comprises two sections; the first section is designed to gather general information from the students on their gender, age, race, mathematics performance etc while the Second section is the Mathematics Anxiety Rating Scale (MARS) designed to establish the students' level math anxiety. The instrument was administered to 20 students that were not part of the pilot research sample, and a 0.87 reliability coefficient was obtained using Cronbach alpha, the instrument was regarded as reliable since the value is high. The data collected was analyzed using (SPSS).

The following null hypotheses were stated to guide the study which was tested at 0.05 level of significance.

Ho_1: Students' math anxiety is not significantly correlated with their Mathematics performance

Ho_2: There isn't much of a difference between math anxiety and gender performance in math

3. RESULTS AND DISCUSSION

Table 1.
Connection between students' academic performance and their math anxiety

Variable	N	Mean	SD	Df	R	P	Decision
Students math anxiety	300	26.08	6.14	298	-.510	.000	Reject HO1
Academic performance	300	10.45	1.97				

An important correlation between students' academic performance and math anxiety was found in the above Table 1. This was as result of the retionship value (r= -.510; p=.000; p<.05). Based on the results, there is a clear and significant link between students' math anxiety and their performance. Since the p-value (0.000) is less than 0.05, the null hypothesis which states that students' math anxiety is not significantly correlated with their Mathematics performance is therefore rejected This suggests that there is significant relationship between students' math anxiety and their Mathematics performance.

Table 2.
ANOVA Summary table of difference of math anxiety and gender academic performance in math
ANOVA[a]

Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	346.785	1	346.785	6.476	0.000[b]
Residual	231454.733	298	146.540		
Total	231801.518	299			

a. Dependent Variable: Academic performance

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From table 2, the result revealed the F (6.476), sig (2tail=0.000). With a sig value of 0.000 which is smaller than 0.05, the null hypothesis 2 is rejected which suggests that there is a notable distinction between math anxiety and gender academic performance in math.

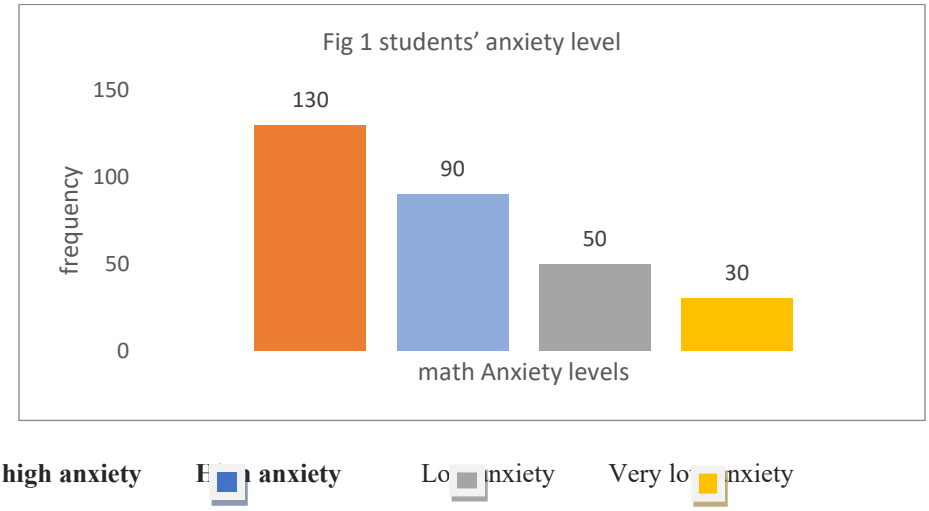
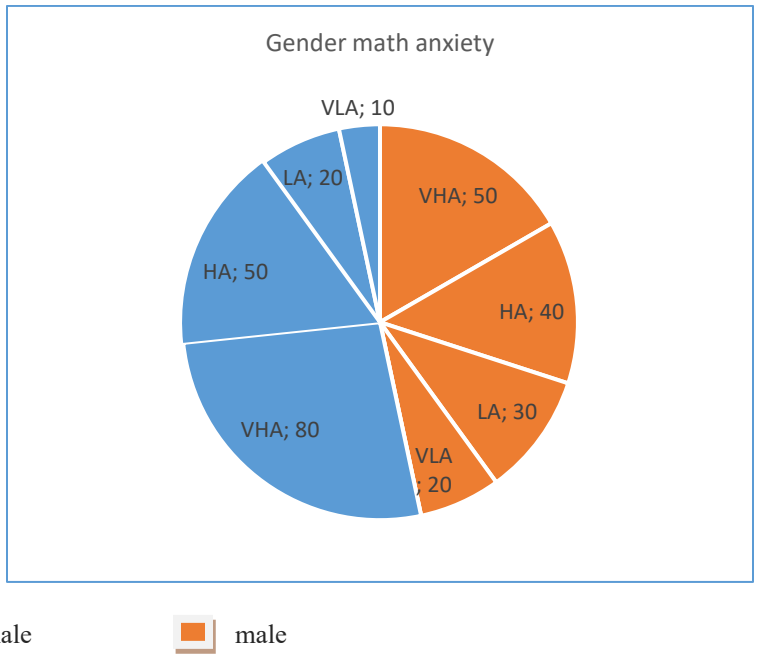


Fig 1

Frequency of students' degree of math anxiety

Among the 300 students, 130 had very High Anxiety, 90 were diagnosed as having High Anxiety, 50 had low anxiety and 30 had very low anxieties in math.



Very High Anxiety (VHA), High Anxiety (HA), Low Anxiety (LA), Very Low Anxiety (VLA)

Fig 2
presents the respondents' level of math anxiety by gender.

According to Fig. 2, which shows the frequency of students' math anxiety levels, 50 males have very high anxiety levels, 40 have high levels, 30 have low levels, and 20 have very low levels. Most of the ladies exhibited high anxiety levels, with 80 having very high levels, 50 having high levels, 20 having low levels, and 10 having very low levels. It was discovered that the majority of students, both male and female, had quite high levels of anxiety. Figure 2 showed that female students have a higher likelihood of experience math anxiety since more of them do. Furthermore, fig. 2 shows that more male students had low and very low math anxiety, although fewer male students had low and very low anxiety. This suggests that students who are female have more arithmetic anxiety. than male students.

Discussion of findings

It was clear from table 1 above that there was a connection between anxiety levels of students and their mathematics performance according to Table 1 above. This suggests that students' math performance and anxiety are directly and significantly related. Figure 1 depicts that the majority of the students had very high or high anxiety levels whereas the minority had either very low or low anxiety levels. Research indicated that anxiety, which may be brought on by being afraid of math, is a factor affecting the students' performance. This might be due to the connection between performance and math anxiety of students. According to Luo, Wang, and Luo (2009), students with an average level of anxiety will be motivated to study, whereas students with high anxiety level should be taught using the proper strategy.

According to Vogel and Collins (2006), who corroborate this findings, students with intermediate anxiety levels do better than those with high anxiety levels. The study's results were in contrast to those of Ajogbeje et al (2013) study, which found that while some students had low or high anxiety levels; most of the students have intermediate anxiety levels. There was a correlation between math anxiety and math performance. Figure 1 indicated that the majority of the senior secondary school students were established to have severe math anxiety. This may be the cause of much of the students' ambivalence toward participating in math-related activities. In the research, the following behavioural signs of math anxiety were noted: (a) absence of assurance in one's ability to solve mathematical problems during an exam (b) regular tardiness and absence from math class (c) non-submission of math assignment (d) sweaty palms and trembling voices when requested to explain a math concept during class discussions (e) purposefully choosing other subjects over math and having doubts about one's math ability.

It was discovered that math frightened the students, which was surprising considering that math was incorporated in the curriculum specifically to help students become future scientists and mathematicians for the nation. Students who struggle with anxiety in math are terrified as regard the subject and purposefully avoid math-related tasks. Therefore, we might draw conclusion that this particular class of students is unable to appreciate the value and applications of mathematics to both their everyday lives and the advancement of the country. The strong difference between math anxiety of students and gender was demonstrated in table 2 and fig. 2 above, suggesting that there exist a notable correlation between secondary school students' anxiety related to mathematics and their gender. Based on the results, there are differences between female and male students' math anxiety levels, suggesting that gender is the determining factor in these levels. This result concurs with Khatoon and Mahmood (2010) and Yuksel-Sahin (2008), whose research revealed a substantial connection between gender and mathematics anxiety, with female students being found to possess higher anxiety levels in math than their male counterparts. .

Contrasting the male with the female, it's possible that the males were more engaged in activities that assisted them to relax (McKean & Misra, 2000).Since male students believed they could do better than the female in math and that males are superior to female students in this regard, the stereotyped attitude was having a significant unfavourable impact on students' anxiety related to math. Since they think that women will experience more anxiety than men, they will behave accordingly. According to Yuksel-Sahin (2008), Wern, Choo, and Sook (2015) studies, women were more likely than men to report high math levels

of anxiety. In their study to compare the anxiety levels in mathematics of female and male undergraduates, Mahigir, Venkatesh, and Karemi (2012) found that there existed a substantial difference between the anxiety levels in mathematics of females and males, with the females scoring higher than their male counterparts which is in agreement with the study.

The study by Devine et al (2012), which sought to understand gender disparity in mathematics anxiety, found that there were really such disparities, with females having higher anxiety levels than males. Compared to men, who show lower mathematics phobia levels, women have higher levels of this fear, which supported the findings These results support research by Oluwole and Muraina(2016) and Saleh et al 2022), all of which found that lowering anxiety increases one's ability to do mathematical tasks.

According to Devine, et al (2012), women can perform better than men in math, but their anxiety levels are a barrier to their success in the math subject, therefore when compared to men, they perform at a lower level. This finding was in contrast to studies by Ozgur (2014), Pourmoslemi, Erfani, and Firoozfar(2013), which revealed no association between mathematics anxiety and gender. Hamza and Helala (2013) investigation into the gender disparities in students' mathematics anxiety did not support these findings; they found no correlation between mathematics anxiety and gender. Due to identical scores on the test they utilized to assess their mathematics fear, it was discovered that both female and male students had similar degrees of anxiety.

These results conflict with those of Wern, Choo, and Sook (2015) study, which found no appreciable variation in anxiety levels between females and males. The effects of anxiety in math on student performance and attitude toward math can also lead to mathematics avoidance and poor performance (Friedel et al, 2010, Saleh et al, 2022). Anxiety in Math has been considered as the cause of students' poor math performance because many students think that math is a stressful subject (Saleh et al, 2022). They, then, make it clear that math anxiety and student performance across gender were related. Secondary schools students in frequently have math anxiety, but more girls do (Wang & Ye, 2015, Saleh et al, 2022).

4. CONCLUSION

Based on the results, most of the students are female. had extremely high and high anxiety levels. The levels of anxiousness among female and male students in secondary school varied significantly. Despite that the findings suggested a connection; we can conclude that the connection between gender issues and students' anxiety in math is not conclusive. There are conflicting results regarding the gender issue; some researchers came to the conclusion that there was no relationship between gender and math anxiety, while others came to the opposite conclusion. To improve education's quality and create a world-class mathematics school system, educational strategies or school curricula should be continually examined and evaluated. Students must maintain a positive perspective and have self-confidence in their ability to succeed in mathematics if they are to lower their math anxiety levels.

As there was a noticeable variation in the degrees of anxiety between the male and female pupils, the instructor should use a teaching strategy that is gender-neutral. It is anticipated that other researchers would consider these findings to be of considerable value and use them to assess children' anxiety levels in different academic areas. It is necessary for the researcher to learn more about this subject to be able to make further conclusions because the relationship between gender and pupils' arithmetic anxiety is not conclusive.

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