***Original Research***

# ANXIETY AND THE PERFORMANCE OF SECONDARY SCHOOL STUDENTS IN MATHEMATICS WITHIN SINGIDA DISTRICT

John Saqware Francis
Department of computer science and mathematics
Institute of Accountancy Arusha

## Abstract

In Singida District, students' performance in the final examination results for mathematics has been consistently low for the past six years. This study investigates the influence of anxiety on mathematics performance among secondary school students. Mathematics anxiety is characterized by feelings of tension, and fear of failure in math tasks is a significant issue affecting students' academic performance. The researchers utilized a quantitative methodology for gathering and analyzing data. The sample consisted of 384 students from twelve secondary schools in the Singida regions were randomly chosen to participate in the study. The study utilized closed-ended questionnaires distributed to participants to collect data. The findings indicated that higher levels of anxiety are associated with lower performance. Additionally, the study identifies various factors contributing to mathematics anxiety, including teaching methods, parental pressure, and lack of confidence. The study concludes with recommendations for educators, parents, and policymakers to implement strategies that can help reduce mathematics anxiety and improve students' performance in the subject. These strategies include creating a supportive learning environment, employing anxiety-reducing teaching techniques, and fostering a positive attitude towards mathematics among students.

## 1.0    INTRODUCTION

In Singida District, students' performance in the final examination results for mathematics has been consistently low for the past six years. This study investigates the influence of anxiety on mathematics performance among secondary school students. Mathematics anxiety is characterized by feelings of tension, and fear of failure in math tasks is a significant issue affecting students' academic performance. The researchers utilized a quantitative methodology for gathering and analyzing data. The sample consisted of 384 students from twelve secondary schools in the Singida

regions were randomly chosen to participate in the study. The study utilized closed-ended questionnaires distributed to participants to collect data. The findings indicated that higher levels of anxiety are associated with lower performance. Additionally, the study identifies various factors contributing to mathematics anxiety, including teaching methods, parental pressure, and lack of confidence. The study concludes with recommendations for educators, parents, and policymakers to implement strategies that can help reduce mathematics anxiety and improve students' performance in the subject. These strategies include creating a supportive learning environment, employing anxiety-reducing teaching techniques, and fostering a positive attitude towards mathematics among students.

## 1.0 INTRODUCTION

Mathematics is a pivotal subject in secondary education, forming the basis for numerous academic disciplines and career paths. Despite its importance, many students exhibit poor performance in mathematics, a trend that can significantly impede their educational and professional prospects. One of the key factors contributing to this underperformance is anxiety. Anxiety related to mathematics is a prevalent issue that affects students' ability to grasp concepts, perform calculations, and succeed in assessments. This study investigates how anxiety can influence mathematics performance among secondary school students in Singida District, Tanzania.

Anxiety in the context of education is recognized as a psychological barrier that can hinder learning and academic achievement (McMillan, 2000). Mathematics anxiety, specifically, can manifest as a fear of engaging with mathematical tasks, a lack of confidence in one's mathematical abilities, and a heightened sense of worry during mathematics examinations. These manifestations can negatively impact cognitive processes such as memory, attention, and problem-solving skills, which are crucial for success in mathematics.

In Tanzania, students' performance in the final examination results for science subjects and mathematics has been consistently low for the past six years, particularly in Singida District, as shown in Table 1 below. This underperformance is due to either a lack of confidence or feeling uncertain about one's mathematical abilities, which can cause anxiety when faced with examination questions. Striving for perfection and worrying about mistakes or inadequate mathematical solutions can intensify exam anxiety. Feeling pressured to excel academically or meet the social

expectations set by peers, parents, or teachers can aggravate exam anxiety related to math (Vakili et al., 2017).

Examination time limits can heighten students' stress and anxiety, particularly for lengthy or difficult math problems. Struggling to recall mathematical concepts or formulas under time pressure may contribute to exam anxiety. Feeling nervous and apprehensive about a math exam is normal if you are unfamiliar with its format or structure (Vitasari et al., 2010). Negative or counterproductive thoughts about one's math performance can heighten exam anxiety. Those who feel unprepared for math exams due to inadequate practice or preparation may experience increased anxiety.

**Table 1: National form four Mathematics results for the twelve schools from the Singida district.**

| Year | Pass rate | | Failure rate | |
|------|-----------|------------|-----------------|------------|
| | Candidates | Percentage | No. of candidates | Percentage |
| 2017 | 217/945 | 22.9 | 728/945 | 77.1 |
| 2018 | 192/992 | 19.2 | 806/998 | 80.8 |
| 2019 | 212/962 | 22 | 750/962 | 78 |
| 2020 | 202/950 | 21.3 | 748/950 | 78.7 |
| 2021 | 219/1050 | 20.9 | 831/1050 | 79.1 |
| 2022 | 261/1232 | 21.2 | 971/1232 | 78.8 |

**Source**; Necta (CSEE) results from 2017 to 2022 statistics (Tanzania, 2017)

The results indicate that over the years, the pass rate has stayed remarkably low. Four grades were derived from this pass rate: D (30–40), C (41–60), B (61–80), and A (81–100). Moreover, the results demonstrate a widespread failure, as depicted in the accompanying figure, with moststudents receiving a grade F, or less than 29, or (0-29) marks (Tanzania, 2017). These statistics show that recently, less than 25% of students in the Singida area have met the requirements to enroll in second-cycle institutions by passing the mathematics course. Research supports the notion that test anxiety affects students' academic performance (Bentil, 2020), which is one of the factors contributing to this failure. This study consistently hypothesizes that students' low performance in mathematics could be related to the anxiety they experience during exams. This research

consistently suggests that poor performance in mathematics may be attributed to exam-related anxiety

## 2.0 OBJECTIVE OF THE STUDY

The overall objective of this study was to examine the influence of anxiety on mathematics performance among secondary school students in Singida District, Tanzania

## 3.0 LITERATURE REVIEW

This section examines various literature based on theoretical and empirical research conducted by other scholars within a similar context. It is organized into two main areas, namely theoretical and empirical literature reviews.

### 3.1 Theoretical Literature Reviews

According to Richardson and Suinn (1972) mathematics anxiety is defined as a tense and anxious state that hinders the ability to work with numbers and solve mathematical problems in various academic and real-world situations. It is a crucial aspect of the affective domain concerning students' engagement with mathematics (Goldin et al., 2011).

Among the various emotional and behavioral disorders is anxiety (Vitasari et al., 2010). Anxious students often exhibit a lethargic attitude toward their academic pursuits, leading to incomplete assignments, low exam scores, and a lack of motivation to learn. Psychological symptoms of anxiety in students include pre-class anxiety, panic attacks, test-induced mental blocks, feelings of helplessness during assignments, and disinterest in challenging subjects. Hot palms, chills, nervousness, panic; rapid breathing, an increased heart rate, and an upset stomach are examples of concurrent physiological symptoms.

Battista (1986) emphasized that success in both technical and non-technical fields, including education, business, social sciences, behavioral sciences, humanities, and the arts, necessitates a solid foundation in mathematics . Math anxiety impacts students' daily lives as well as their academic careers (Casty, (2021). It may potentially worsen stress, which is associated with various other problems. Therefore, enhancing students' mathematical proficiency in the classroom is essential as it prepares them for the future workforce. Math is one of the most important subjects taught in school curricula worldwide. There are evident connections between this field of study and other disciplines, particularly science and technology.

### 3.1.1 Anxiety

During the literature review, various definitions of anxiety were discovered (Bentil, 2020). It asserts that anxiety has a complex structure, with fear being one way to describe its components. According to Süren and Kandemir (2020), anxiety can be described as a feeling of subjective tension and worry that emerges with a particular blend of cognitive, emotional, physiological, and behavioral symptoms. Several definitions in the literature review underscore the impact of mathematics anxiety on individuals' negative attitudes toward mathematics and feelings of helplessness (Krauss, (2008). Math anxiety as described by Mann and Walshaw (2019) is an irrational state that restricts students' career options, impedes their mathematical learning, and instills fear of the subject. It jeopardizes students' academic success and hinders them from achieving their full potential.

### 3.1.2 Impact of mathematics anxiety

Richardson and Suinn (1972) defined mathematics anxiety as the discomfort or apprehension individuals experience when faced with mathematical tasks in their daily and academic lives. This unease can result in memory lapses and a decrease in self-confidence. Many students opt out of pursuing careers in mathematics due to these anxieties (Kothari, 2004). Moreover, individuals with high mathematics anxiety enroll in fewer mathematics courses, achieve lower grades in their courses, and demonstrate lower mathematics achievement and abilities compared to their peers with low mathematics anxiety (Mann, 2019).

Similarly, Richardson and Suinn (1972) highlighted that a student's apprehension about mathematics could hinder their performance in basic arithmetic classes or as they strive to move on to more advanced math courses. Mathematics anxiety refers to a negative emotional response to hypothetical or actual mathematical situations (Castaño et al., 2020). The consequences of arithmetic anxiety are quite significant in this scenario. It is associated with low self-esteem, diminished interest in the subject, and complete avoidance of mathematics.

### 3.2 Empirical Literature Reviews

Anxious students typically exhibit a passive attitude toward their academic pursuits (Yusuf et al., 2018). They lack enthusiasm for studying, perform poorly on exams, and fail to complete assignments to the required standard. As they aspire to join the middle class, Tanzanians are placing greater emphasis on science, math, and technology (Kitta, 2004). However, students' interest in

studying mathematics is waning, and their mathematical proficiency is currently deteriorating (Adams & Holcomb, 1986).

Despite the widespread agreement that mathematics is essential for intellectual development and the overall progress of a country, a significant percentage of students experience anxiety about the subject or eventually grow to dislike it during their school years. Mann and Walshaw (2019) contend that science and technology depend on mathematics, and if students do not study it, the nation's scientific and technological foundation will be undermined. Mathematics anxiety is a condition where negative emotions hinder an individual's ability to solve mathematical problems. It goes beyond a mere dislike of math, leading to a tendency to completely avoid math-related situations and math classes altogether. Also Mann and Walshaw (2019) contend that if students skip math class, the nation's foundation in science and technology is at risk because mathematics is a prerequisite for numerous disciplines within these fields.

Numerous studies have documented the negative impact of anxiety on academic performance (Sister Mary Fides Gough, 1954). For instance, high levels of mathematics anxiety are associated with lower performance on mathematics tasks. Their research indicated that anxiety disrupts working memory, which is essential for solving mathematical problems. Similarly, Mann and Walshaw (2019) conducted a meta-analysis that demonstrated a significant negative correlation between mathematics anxiety and mathematics performance across different age groups and educational levels.

Empirical studies have identified several factors that contribute to mathematics anxiety among secondary school students. Mkumbo (2013) conducted research in Tanzania and found that students' perceptions of mathematics as a difficult subject, negative past experiences with mathematics, and fear of failure were significant predictors of mathematics anxiety. Furthermore, the role of teacher attitudes and teaching methods in exacerbating students' anxiety levels (Fidele et al., 2019).

## 4.0 METHODOLOGY

### 4.1 Area of the Study

A research site, in this context, denotes a particular geographic area where researchers collect data for their study. The study was conducted in the Singida district. The researchers selected this location for its convenient accessibility and cost-effectiveness for fieldwork.

## 4.2 Research Approach and Design

This study investigated the influence of mathematics anxiety on academic performance among secondary school students in the Singida region using quantitative methods and a correlation research design. This approach was selected because it effectively illustrates the relationship between two variables. The researchers utilized a quantitative methodology for gathering and analyzing data, as it provides objective information that can be communicated through numerical and statistical methods. This approach is also proved valuable in helping the researchers obtain appropriate and ample data for the study (Lubawa, 2021).

## 4.3 Target Population and Sample Size

The intended study population comprised 10,234 students enrolled in both public and private secondary schools in the Singida area. Twelve secondary schools in the Singida region were randomly chosen to participate in the study. The researchers established a margin of error (e) of 5%. 384 students were selected for the study through simple random sampling using the Yamane method. This equation calculates the sample size (n) based on the population size (N) and margin of error (e) as follows and as used by (Yamane, 1973)

$$n = \frac{N}{1 + Ne^2}$$

## 4.4 Data Collection

The study utilized closed-ended questionnaires distributed to participants to collect data. The results of the end-of-term Mathematics examination were documented on a checklist to evaluate each participant's proficiency in the subject. This type of data collection is also used by (Haydon, 2012).

## 4.5 Data Analysis

The study utilized descriptive statistical analysis on quantitative data with the assistance of the Statistical Package for the Social Sciences (SPSS) version 26. The findings regarding mathematics anxiety were delineated descriptively using measures such as frequency, percentage, and mean. The researcher utilized inferential statistics for correlation analysis. The correlation coefficient was employed to examine the impact of mathematics anxiety on academic performance in mathematics among secondary school students in the Singida district. To assess the impact of math anxiety on math performance, regression analysis was employed (Jameson & Fusco, 2014). The significance

threshold for studying the hypothesis was set at a correlation coefficient of 0.025.

## 4.6 Ethical Considerations

Ethical guidelines in research are a collection of standards that direct research methods and conduct to adhere to human rights and moral principles (Mkumbo & Mbise, 2022). The researchers followed ethical principles including voluntary participation, informed consent, anonymity, confidentiality, minimizing potential harm, and transparent communication of results (Kothari, 2022).

## 4.7 Validity and Reliability

To ensure the study's validity, the researchers employed multiple data collection methods and utilized various information sources to ensure accurate data usage and reliable results (Semlambo et al., 2022). Additionally, the researchers ensured the study's reliability by recognizing and addressing its limitations. Moreover, the researchers carried out a preliminary study prior to the main research.

## 5.0    RESULTS ND DISCUSSIONS

The study aimed to investigate the influence of mathematics anxiety on the academic performance of secondary school students in Tanzania. Initially, each participant was asked to assess their reaction to eight (8) items using a five-point Likert scale to evaluate the impact of mathematics anxiety in the Singida context. Based on the mean values, the five-point scale intervals are defined as follows: Ratings between 1 and 2.5 indicate low agreement, ratings between 2.5 and 3.5 indicate neutrality, and ratings between 3.5 and 5.0 indicate high agreement (Aguilera, 2021) and (Spiliotopoulou, 2009).  A thorough examination of the results can be found below.

| Statements | Strongly Disagree (%) | Disagree (%) | Neutral (%) | Agree (%) | Strongly Agree (%) | Mean score |
|---|---|---|---|---|---|---|
| $A_1$ | 24.2 | 8.9 | 2.8 | 25.2 | 29.8 | 3.32 |
| $A_2$ | 24.4 | 20.4 | 3.6 | 15.6 | 27.9 | 3.02 |
| $A_3$ | 16.6 | 12.5 | 4.3 | 25.6 | 31.7 | 3.48 |
| $A_4$ | 34.6 | 20.9 | 4.9 | 17.6 | 12.6 | 2.489 |
| $A_5$ | 36 | 18.1 | 3.1 | 17.6 | 15 | 2.526 |
| $A_6$ | 14.5 | 8.4 | 2.6 | 26.6 | 38.7 | 3.73 |

| | | | | | | |
|---|---|---|---|---|---|---|
| $A_7$ | 53.4 | 15.8 | 2.9 | 8.7 | 11.2 | 2.004 |
| $A_8$ | 28.9 | 14.7 | 3.6 | 15.8 | 29.6 | 3.028 |

**Sources: Field Work 2023**

The above letter i.e. $A_1$ up $A_8$ stands for the following statements;

$A_1$= my challenge in selecting a science combination is rooted in my poor Mathematics grades.

$A_2$ = my feelings toward my Mathematics teacher are negative which promotes avoidance.

$A_3$ = Attending a supplementary Mathematics class is necessary for me to improve my understanding.

$A_4$ = my preference is to read other subjects rather than engage in Mathematics class.

$A_5$ = I consistently became drowsy in mathematics class.

$A_6$ = the fear I have for Mathematics plays a role in my academic struggle.

$A_7$ = Poor attendance at School is attributed to my anxiety and fear of Mathematics.

$A_8$ = I experience a loss of confidence when faced with Mathematics, especially in the company of peers.

## 5.1 Poor Performance Stems from a Math Phobia ($A_6$).

The study explored the possible correlation between anxiety and inadequate mathematical skills. In this context, 14.5% of participants strongly disagreed with the idea that fear of mathematics leads to poor academic performance. 2.6% of participants expressed a neutral viewpoint, while 8.4% disagreed with the statement. Conversely, 38.7% of respondents strongly endorsed the statement linking fear of mathematics to subpar performance, a sentiment echoed by 26.6% of respondents. These findings were supported by a mean score of 3.73, indicating respondents' agreement that mathematics anxiety impacts performance.

According to research by Aguilera (2021), students who experience mathematics anxiety are prone to harboring negative attitudes toward the subject, potentially leading to reduced self-esteem, disillusionment, and academic underachievement. Studies indicate a correlation between test anxiety and mathematics anxiety, suggesting that students' anxiety during tests may contribute to their poor performance in mathematics. This situation often arises when students fail to adequately prepare for exams, leading to increased anxiety levels and subsequent failure in tests or exams.

## 5.2 Snoozing During Math Class ($A_5$).

The study aimed to ascertain whether students' inadequate performance in mathematics class was

linked to their tendency to nod off. In this context, 36% of participants strongly opposed the idea that they usually dozed off in math class. 18.1% of respondents disagreed with the statement, while 3.1% remained neutral. Conversely, 17.6% of respondents reported frequent daydreaming in mathematics class, with an additional 15% strongly supporting this assertion. The phenomenon of daydreaming during class sessions has been observed to impact students' performance.

According to research conducted in the Philippines students experience disrupted sleep patterns, leading to fatigue and periods of discomfort that may result in them nodding off in class (Sygaco, 2020). The study highlighted that students need an average of 8 to 10 hours of sleep. According to this study, students' subpar academic performance in STEM fields (science, technology, engineering, and mathematics) was worsened by frequent instances of sleeping during classes in these subjects. When students lack interest in mathematics, the likelihood of them dozing off in class increases. Additionally, underscores the significance of children receiving sufficient sleep, highlighting its role in promoting mental stability and potentially improving academic performance (Hershner, 2020).

### 5.3 Studying Different Subjects in the Math Classroom (A₄).

The survey revealed that 20.9% of respondents disagreed with this notion, 4.9% were neutral, and 34.6% strongly disagreed. Twenty percent (20%) of respondents strongly agreed with the statement, while seventeen percent (17%) expressed a preference for studying other subjects in math class. Again, the majority of survey participants had a negative attitude towards focusing on anything other than math in class, as indicated by their mean score of 2.489.

Despite the respondents' impartial assessment, it does provide a potential indication of students' disinterest in mathematics. Students who are apprehensive about math are at risk of becoming distracted by other activities and losing focus. Similarly, study found that a significant factor contributing to students' mathematical failures is their lack of attention and focus. According to survey respondents, the complexity of mathematical formulas and reasoning made the subject difficult for them to grasp.

### 5.4 Having Mathematics Fear and Losing Confidence in Front of Other Students.

The study aimed to investigate whether participants' mathematics anxiety influenced their self-assurance in front of peers. According to the survey, 3.6% of respondents were neutral, 14.7% expressed disagreement, and 28.9% strongly disagreed with the statement. Additionally, 15.8% of

participants agreed with the statement, and 29.6% strongly agreed that their fear of mathematics diminishes their confidence when in the company of other students. Given that nearly half of the participants indicated that their mathematics anxiety led to reduced confidence in front of others, it can be inferred that a significant number within the group experience diminished self-assurance. According to magnate (2022), psychological factors such as a negative attitude towards mathematics could contribute to mathematics anxiety in students, leading to reduced confidence and weakened self-assurance. Lack of confidence poses a significant obstacle for students experiencing mathematics-related anxiety, as observed in the research (Dodd, 1999).

## 5.5 Low Attendance at School Due to Fear of Mathematics

The study aimed to investigate whether participants' mathematics anxiety affected their school attendance. In this context, 53.4% of respondents strongly opposed the idea that their poor school attendance was due to a fear of mathematics; 15.8% concurred, and 2.9% remained neutral. However, 8.7% of participants agreed with the statement, and 11.2% strongly agreed that their fear of mathematics was the cause of their low attendance at school. The previous results were supported by a mean score of 2.004, indicating strong disapproval among respondents regarding the idea that their absenteeism is caused by mathematics anxiety. The findings suggest that students' fear of mathematics does not influence their school attendance. However, a study has shown that students may be hesitant to attend class for various reasons, such as anxiety about mathematics teachers or apprehension about answering questions in front of their peers (Magnate, 2022).

## 5.6 Being Unable to Select a Science Major Because of Low Math Grades

The study aimed to investigate whether participants' low mathematics scores influenced their choice to pursue the scientific combination. In this instance, 2.8% of respondents were neutral, 8.9% disagreed, and 24.2% strongly disagreed. Additionally, the statement that their poor mathematics scores deterred them from choosing a science combination was supported by 25.2% of participants and strongly supported by 29.8% of respondents. Many students have been compelled to abandon career paths in mathematics due to their fear or anxiety related to the subject.

For example, a study conducted in 2007 by Scarpello revealed that 75% of Americans opt not to pursue higher education in mathematics or careers in the field (Langat, (2015). Aversion and apprehension towards mathematics develop in students experiencing mathematical anxiety, resulting in poor academic performance. In Tanzania, individuals with failing mathematics grades are barred from pursuing careers in sectors such as engineering, clinical medicine, pharmacy,

accounting, and finance (Kileo, 2015).

## 5.7 Avoiding the Mathematics Instructor

The aim of the study is to ascertain whether participants deliberately ignore their mathematics teacher out of resentment. According to the survey results, 20.4% of participants expressed dislike, 24.4% strongly disagreed, and 3.6% were neutral. Additionally, 15.6% of respondents agreed that they intentionally disregard and resent their math teacher, while 27.9% strongly agreed with this statement. It is observed that highly anxious math students frequently evade their mathematics teacher during class for fear of being questioned, providing incorrect answers, or facing criticism. These students often prefer seats at the back of the classroom.

The researcher notes from his / her teaching experience that some students avoid attending classes altogether due to fear of their mathematics teacher. They might also hesitate to engage if they worry about giving incorrect answers and facing consequences. Furthermore, some students might opt to skip classes entirely because they feel unprepared for the material or haven't been assigned any homework or tasks by the teacher.

## 5.8 Analyzing Multiple Regression and Correlation

The impact of mathematics anxiety on secondary school performance was assessed through regression analysis. The 0.025 level of significance was used with the following hypothesis.

$H_N$ - Mathematics anxiety does not have a significant effect on secondary school students' mathematics performance.

$H_A$ - Mathematics anxiety has a significant effect on secondary school students' mathematics performance. The results summary is shown in the table below:

**Regression Coefficient on the Effects of Mathematics Anxiety and Students' Performance**

| Model | Unstandardized Coefficient | | Standardized Coefficient | T | Sig |
|---|---|---|---|---|---|
| | B | Std. error | Beta | | |
| Constant | 3.567 | .125 | | 9.898 | 0.000 |
| Anxiety | .536 | .0545 | .407 | 6.20 | 0.000 |

The significance of mathematics anxiety's impact on secondary school students' mathematics performance is illustrated in the table above. If the significance level is below 0.025, the null hypothesis could be rejected, if it exceeds 0.025, it could be accepted. The correlation between math anxiety and mathematics performance is statistically significant, as indicated by the preceding table (two-tailed). This indicates the rejection of the null hypothesis and acceptance of the alternative hypothesis. By adopting the alternative hypothesis, the study confirms that mathematics anxiety has a significant impact on secondary school students' mathematics performance.

The regression equations illustrate the relationship between an independent variable and a dependent variable. Therefore, the regression equation in the provided table above for the impact of math anxiety on mathematics performance is $0.536x + 3.567$. This influences the mathematics performance under constant conditions of all other factors.

Again, based on the properties shown below

1. The correlation coefficient, $r$ ranges between $-1 \leq r \leq 1$ (Fong, 1985).
2. If the correlation coefficient ($r$) is greater than zero (0) but less or equal to 1 i.e. ($0 < r \leq 1$), then the relationship between variables is positive (Asuero, 2006)
3. If the correlation coefficient ($r$) is greater or equal to -1 but less than zero (0) i.e ($-1 \leq r < 0$), then the relationship between variables is negative.
4. If the correlation coefficient is equal to zero (0), there is no association between variables (Asuero, 2006)

The study reveals that the correlation coefficient r=0.407 is falling within category two (2) indicates a positive association between the variables, suggesting that mathematics anxiety affects my mathematics performance.

## 6.0 CONCLUSION AND RECOMMENDATION

In conclusion, this study has explored the influence of anxiety on mathematics performance among secondary school students in Singida District, Tanzania. Anxiety, as a psychological factor, significantly impacts students' ability to perform well in mathematics, affecting their confidence, motivation, and cognitive functioning. The theoretical underpinnings from educational psychology highlight how anxiety can impair students' working memory, attentional focus, and problem-solving abilities, all of which are crucial for mathematics proficiency. Empirical studies reviewed in this research consistently demonstrate a negative correlation between anxiety levels and

mathematics performance, underscoring the need for interventions to mitigate these effects. Findings from this study indicate that a considerable proportion of students in Singida District experience anxiety related to mathematics, influenced by factors such as academic pressure, perceived difficulty of the subject, and fear of failure. These anxieties manifest in avoidance behaviors, test anxiety during assessments, and overall disengagement from mathematics learning.

Educational implications suggest the importance of creating supportive learning environments that foster a positive attitude towards mathematics and reduce anxiety-inducing factors. Strategies such as promoting growth mindset, providing differentiated instruction, implementing relaxation techniques, and offering psychological support can help students manage anxiety and improve their mathematics performance. Furthermore, teacher training programs should emphasize awareness of anxiety symptoms and effective instructional practices that promote a sense of competence and autonomy in mathematics learning. Collaborative efforts among educators, parents, and policymakers are essential to implement holistic approaches that address both academic and emotional needs of students.

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