PERCEPTION OF STUDENTS ON THE CAUSES OF MATHEMATICS ANXIETY IN SENIOR SECONDARY SCHOOL IN BOSSO LOCAL GOVERNMENT AREA OF NIGER STATE

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Abstract

This study examined the perception of students on the causes of mathematics anxiety in senior secondary schools in Bosso Local Government Area, Niger State, this study has four objectives as perception of students on the causes of mathematics anxiety based on schools, societal, students and teachers factors, fours research questions were raised in line with the objectives to guides the study. The population of the study consist of three thousand one hundred and twenty (3,120) public secondary school SS2 students offering mathematics in bosso local government. Three hundred and twelve (312) SS2 studewnts were used as a sample of the population from six public school which was determined by simple random sampling techniques. The research developed a self- designed five rating scale structured questionnaire, titled "perception of students on the causes of mathematics Anxiety" which was validated by expert in science education department and industrial and technology education department, and the reliability of the instrument was determined using Cronbach alpha formula, the correlation coefficient of 0.72 was obtained which implies that the instrument was highly reliable for the study, data obtained from the respondents was analyzed using statistical package for social science (SPSS) involving the use of means and standard deviation. However, finding of this research reveal that mathematics students have positive perception toward mathematics Anxiety. Based on the finding the following recommendation were drown: Mathematics Teacher ought to be re-trained occasionally to have thoughts of creative methodologies of instructing mathematics to try not to cause Anxiety among students, the general public ought to be re-orientated on the significance of mathematics and the job it plays to the public improvement of any country, Students ought to be orientated on the career decisions accessible in mathematics so as students can have certainty of learning it, teacher should show eagerness about the subject in other to win the hearts of the students.

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CHAPTER ONE

INTRODUCTION

1.0. Background of Study

one of the most important disciplines in university admissions is mathematics. As a result, all students are required to participate in the Support tests before being admitted to any Nigerian higher education institution. This is because Nigeria as a country relies completely on mathematics as one of the most important courses that can help the country achieve its science and innovation goals (Jegede, 2014). It is undeniable that kids are uninterested in mathematics. Mathematics is something that students despise or despise. Students in Nigeria's secondary schools do not attend Mathematics classes (Fatola, 2015) Attendees to mathematics classes do not pay attention to the instructor. The majority of kids do not practice math on their own and do not solve arithmetic problems on their own. When given the choice, many students, according to Amazigo (2014), would rather not have anything to do with mathematics. This mindset has resulted in them performing poorly in both internal and external mathematics examinations, among other things. The recent scarcity of undergraduates in mathematics and mathematics education in Universities, Colleges of Education, and Polytechnics, on the other hand, suggests that mathematics is no longer popular with students, particularly at the higher institution level. There is little question that students' dislike for the subject grows as a result of their poor performance in it. This aversion stems from the fact that kids have a natural dread of mathematics anytime it is addressed (Amazigo,2014)

Mathematics anxiety is a problem to many people. It can occur in all levels of education from primary school to higher education, and once established, can persist in life,

interfering with everyday activities involving numeracy and further learning in Mathematics (Oxford & Vordick, 2016). According to (Truttschel, 2012), Mathematics anxiety can have detrimental effects for college students including feeling of nervous tension, fear of rejection, and stress. Many students who suffer from mathematics anxiety have little confidence in their ability to do mathematics and tend to take minimum number of required mathematics courses, greatly limiting their career choice options. Mathematics is the foundation on which the whole essence of living revolves and the platform for scientific and technological innovations. Anxiety refers to a feeling of distress or alarm caused by danger or pain that is about to happen (Tobias, 2013).

In intensity it varies from a mild sense of apprehension to paralyzing terror. In anxiety there is always the desire to shrink, to get away or retreat from the exciting cause. The stimuli for anxiety are many and varied. In early infancy any sudden or intense stimuli like loud and sudden noise, unexpected jerk, and flash of bright light or loss of support may cause anxiety though there are large individual differences. Any sudden change in the environment, which the individual regards as threatening and for which he is unprepared, produces anxiety. When the threatening situation is removed or controlled, and the danger real or imaginary has passed, anxiety disappears. Also, as activities or experiences expand or interests and abilities grow, the number and kinds of anxiety increase. But as the power of adjustment through experience increases many of childish anxiety disappear. Some anxieties are as a result of conditioning effect. They will have to be reconditioned by attaching pleasant circumstances and experiences with situations and objects, which causes the anxiety. Praise or rewards attached to or associated with fearful tasks or situations will help to reduce anxiety. There are some anxiety where the best thing to do is to act as the anxiety suggests, that is, get away. This would be true in the case of a poisonous snake, and mad dog. However, with other anxieties we need to face it, we must have courage.

Example of such is mathematics anxiety. The phenomenon of mathematics anxiety is variously referred to as Mathemaphobia or pathological fear in mathematics (Stephen & Plowman, 2015).

According to him, anxiety in mathematics can cause one to forget and lose one's self confidence. Adebule (2014) concludes that mathematics education in Nigeria has persistently been experiencing one form of problem or the other, particularly in relation to the general poor performances of students. According to him, such academic problems include students' unparalleled hatred, indifference, anxiety and poor attitude towards mathematics, lecturer s' dissatisfaction, and poor environment, non-availability of appropriate textbooks and poor method of teaching. According to (Adedayo, 2017), Mathematics encourages the habit of self-reliance and assists learners to think and solve their problems themselves. Numerous factors were identified by some researchers for the inconsequential performance by students, some of which included: shortage of qualified Mathematics lecturers, poor facilities, equipment and instructional materials for effective teaching (Yemi & Adeshina, 2013), and large pupil-to-lecturer ratios (Alele-Williams, 1988).

1.1. Statement of the problem

in Nigeria, it is widely accepted that a greater number of students will choose non-mathematics related courses while applying for higher education. The number of students teaching non-mathematics courses in higher education exceeds the number of students teaching scientific courses by a factor of ten. This can be linked to a fear of maths. Students consider science to be a difficult subject to understand, thus they devote less time, effort, and focus to it. However, the scientist is interested in students' perceptions of the circumstances and outcomes of arithmetic. Therefore, it is very dangerous to neglect the

adverse effects of anxiety in mathematics. Various attempts have been made by several researchers (Aremu& Sokan, 2003; Hassan, 1983; Sofesan, 1981; Wiseman, 2015) to examine the causes of poor academic performance. They discovered causes like intellectual ability, poor study habit, achievement motivation, lack of vocational goals, socio economic status and anxiety; few of them have actually dwelt on anxiety as a major cause of poor academic performance and its reduction among students. However, this study investigates the perception of students on the causes of mathematics anxiety in senior secondary school in Bosso Local Government Area, Niger State.

12: Aim and Objectives of the Study

This study is to examine the perception of students on the causes of mathematics anxiety in senior secondary school in Bosso Local Government Area, Niger State. Specifically the following objectives guided the study, which are:

i. To find out the perception of students on the causes of mathematics anxiety based on students factor in senior secondary schools?

ii. To examine the perception of students on the causes of mathematics anxiety based on school factor in senior secondary schools?

iii. To examine the perception of students on the causes of mathematics anxiety based on Teacher's factor in senior secondary schools?

iv. To find out the perception of students on the causes of mathematics anxiety based on societal factor in senior secondary schools?

1.3 Research Questions

The following research questions were posed to guide the study

i. What is the perception of students on the causes of mathematics anxiety based on student's factor in senior secondary schools?

ii. What is the perception of students on the causes of mathematics anxiety based on school factor in senior secondary schools?

iii. What is the perception of students on the causes of mathematics anxiety based on Teacher's factor in senior secondary schools

iv. What is the perception of students on the causes of mathematics anxiety based on societal factor in senior secondary schools?

1.4 Significance of the Study

This study will be of significant both explicit and multiplier expositions for students, teachers, school administrators, parents, education planners, and researcher. The study will hopefully

Help students to develop awareness for mathematics and avoid a repulsive approach to it in relation to other subjects. It is likewise hope that the perception of students towards mathematics anxiety will drastically change, with the view to encourage, and motivate students to learn mathematics

Also the findings of this study will educate the students of senior secondary schools and the general public on the perception of students on the causes of mathematics anxiety among students of senior secondary schools.

Point out what mathematics teachers can do to broaden the awareness of students in mathematics and make the subject attractive to them. It is equally hope that teachers would

find all possible means of making mathematics period more interesting, rather than being boring.

Highlight the role of the principal and other relevant school leaders in the task of making the students to like and option for mathematics

Make parents realize their roles to encourage their children to show interest in their competences and help them in choosing their careers properly;

This research will be a contribution to the body of literature in the area of the effect of personality trait on student's academic performance, thereby constituting the empirical literature for future research in the subject area.

1.5 Scope of the Study

The study will strictly be restricted to the investigation of perception of students on the causes of mathematics anxiety in senior secondary school in Bosso Local Government Area, Niger State of Nigeria, in order to obtain useful and relevant information about the findings, only Government senior secondary schools that offer physics and gender would be considered. Due to the time factor and financial problems, the research will only cover six selected senior secondary schools within the study area.

1.6 Limitation of Study

Time constraint - The researcher simultaneously engaged in this study with other academic work. This consequently had cut down on the time devoted for the research work.

1.7 Operational Definition of Terms

The following terms are used throughout this qualitative study concerning perception of students and teachers on the causes of mathematics anxiety among students of senior secondary schools.

Anxiety:- An unpleasant state of mental uneasiness, nervousness, apprehension and obsession

Causes: something that gives rise to an action, wonder or condition.

Mathematics: is the science that deals with the logic of shape, numbers, quantity and arrangement.

Mathematics Anxiety (Math Anxiety): The feelings of tension and anxiety that interfere with the manipulation of numbers and the solving of mathematical problems.

Perception: a belief or opinion, often held by many people and based on appearances

CHAPTER TWO

2.0 REVIEW OF LITERATURE

2.1 The Conceptual Frame Work

Out of all the subject taught in secondary school, there is none that appears to make as much tension to numerous students as mathematics, mathematics anxiety was refers as a sensation of exceptional dissatisfaction or vulnerability around ones capacity to do mathematics and a passionate connection to mathematics (Kumara2015). Because of this mathematics anxiety has been an issue of significance to mathematics instructors and analysts across the globe. To accomplish a fruitful research, various meanings of mathematics anxiety and the exploration identified with the subject has been investigated in this literature review. It likewise analyzed past studies related with mathematics anxiety and the discernment that students and teachers had on the reasons for mathematics anxiety particularly students in senior secondary school.

According to Fulya (2013), it is a multidimensional structure and is knotted with the notion of fear, worry and tenseness. Mathematics anxiety affects mathematics related task and typically occurs during the classroom instruction whether working on classwork, homework, or in group discussion involving finding solution to mathematics problems. Understanding the material during class is critical, but taking a mathematics test can trigger even higher levels offer mathematics anxiety resulting in a student forgetting everything they learned about a certain mathematical topic. Certain mathematical topic.

According to Bower (2011), by about age 12, students who feel threatened by mathematics start to avoid mathematics courses, do poorly in the few mathematics classes they do take, and earn low scores on mathematics-achievement tests.

The change to middle school is challenging and hard for students. Students entering school done having one middle teacher from beginning of the day to the furthest limit of the day. Middle school students are relied upon to gain from various speakers in mathematics educators, social investigators, science, and certain electives for the duration of the day. Elias and Steward (2015), portrayed the juvenile years as being loaded up with disarray and apprehension. Youths should work through troublesome formative assignments while heading to secondary school. The middle school years are the fight ground for students to scrutinize their reasoning abilities. Students enter schools as substantial masterminds and are required to leave as extract scholars. As these students acquire and foster basic reasoning abilities, their attitude starts to zero in on societal position rather than scholarly standing. Friend connections start to be more significant during the juvenile years (Elias and Head servant, 2015; Tobias, 2013).

2.1.1 Nature of Mathematics Anxiety

Mathematics anxiety portrays the perspectives created through close to home insight, and individual passionate reactions to these encounters. Negative sentiments towards learning science emerge as an outcome of a scope of experiences identifying with the manner in which mathematics is introduced, instructed and learnt by people (Green and Allerton, 2014). As per (Sheffield and Chase 2017), mathematics nervousness from multiple points of view is not difficult to depict and characterize. It is the sensations of nervousness that a few people experience when dealing with numerical issues. Like other type of anxiety, students may feel their heart beat all the more rapidly or firmly, they may accept they are not fit for finishing numerical issues, or they may try not to endeavor mathematics courses. Mathematics anxiety is known as a handicapping condition when students battle with mathematics. This condition is a particular and genuine dread of science that makes students have an over the top desire to stay away from mathematics totally (Oxford and

Vordick, 2016). Mathematics nervousness can happen in all degrees of instruction from Elementary school to advanced education, and once settled, can endure throughout everyday life, meddling with each day exercises including numeracy and further learning of science. Mathematics ematics anxiety for the most part comes from negative encounters in working with educators, guides, cohorts, guardians or kin (Yenilmez, Girginer, and Uzun, 2017).

Numerous students who experience the ill effects of mathematics anxiety have little trust in their capacity to do science and will in general take the base number of required mathematics courses, significantly restricting their profession decision choices. This is sad particularly as society turns out to be more dependent on numerical education (Scarpello, 2015). Barnes (2016) expressed that mathematics anxiety could be brought about by various things: terrible past encounters with mathematics in the study hall, a parent passing on the message to their youngsters that science is exhausting and pointless, or from the perspectives of the actual instructors. Science anxiety is an issue for some understudies, not just those in formative mathematics courses. In the event that a method is found to work with the mitigation of science anxiety for students through further developed instructional methods, data, and assets, it could cure student mathematics anxiety while assisting them with procuring the important mathematics abilities needed for degree fulfillment (Johnson, 2013)

2.1.2 Misconceptions about Mathematics Anxiety

Misconceptions about mathematics capacities and generalizations should be dispersed to students to guarantee mathematics anxiety and mathematics evasion doesn't crawl into students life (Bower, 2011). The main confusion that individuals have about mathematics is that guys are preferred in mathematics over the females. At the point when guys and

females are dealt with contrastingly regarding capacity and generalizing, levels of anxiety and accomplishment are influenced.

The second misinterpretation is that people that are acceptable in mathematics are conceived acceptable at it. Guardians protecting the idea that numerical capacity is characteristic or acquired may likewise be a contributing variable to mathematics nervousness. At the point when guardians feel their kid gets terrible grades in mathematics on the grounds that the youngster essentially does not have a science brain and fault a childs horrible showing on their failure to do mathematics this can be hindering to a childs achievement in mathematics (Godbey, 2018). Similarly, instructors assume a significant part in freeing this misguided judgment in the study hall.

The third misconception is that there is just a single method to tackle mathematics issue as seen by Blazer (2011). For example, when students are told lower a long time in school that all parts are composed with the greatest number on base and afterward told at their upper year that the greatest number can be on the best, students numerical world may disintegrate. Having have been enlightened two clashing standards regarding portions, students should now take their present educator's word on which is the right strategy. An instructor showing various portrayals of issues, arrangements, and clarifications can prevent students from having confidence in only one manner to do mathematics (Blazer, 2011).

The fourth misinterpretation is that everything mathematicians can tackle issues rapidly in their minds. Tackling all mathematics issues rapidly in one's head doesn't make that singular more wise than somebody who finishes the work on paper. At the point when this load of misinterpretations are not tended to, students numerical anxiety may start to take another measurement. A basic thought that an understudy won't ever have the option to

perform better in mathematics as a result of their sex or guardians mentalities frequently holds students back from endeavoring more significant levels of mathematics. Thus, other, more genuine indications will keep on rising up out of understudies, making an understudy who is restless about mathematics. Instructors should know about the numerous components prompting the reasons for mathematics anxiety to students.

2.1.3 Teacher's Role in Reducing Mathematics Anxiety

The teacher can help his students overcome mathematics anxiety. The mathematics teacher needs to be excited about teaching mathematics and he must believe that there is a reason for his students to learn the mathematics. If the teacher is not motivated to teach the subject, then one cannot expect his students to be motivated to learn. It has been shown that students tend to internalize their instructor's interest in and enthusiasm for teaching mathematics (Jackson & Leffingwell, 2014). If the teacher is not happy about teaching mathematics or does not enjoy being with students in the classroom, then students are less likely to be motivated to learn the material. The teacher needs to be able to put himself in his students' shoes and remember what it was like to struggle with understanding new concepts (Schwartz, 2016). He needs to understand that it takes time for students to master concepts. Therefore, the teacher must have patience. He also should never give up trying to help his students succeed. He needs to give specific examples and applications of mathematics. The teacher should review basic mathematics skills with his students. Students need to be able to do the basics before they can move on to more complicated problems. Learning mathematics is a building block process. Each step builds on another one. It is imperative when teaching mathematics that the teacher progresses from simple problems to complex ones (Schwartz, 20016). Mathematics is a language on its own. It is full of definitions, vocabulary, symbols and notations that students must know in order to succeed in mathematics. Therefore, the teacher needs to make sure that his students can

read and speak the language. The students also need to have support systems in mathematics, whether this comes from their parents at home or with other students at school (Schwartz, 2016). They need to have people they can go to when they are having difficulty who will help them look at the problem through a different view point and encourage them not to give up on the problem. Cooperative learning is one way students can get this support. Sometimes other students can explain concepts in a manner that their peers will understand and be able to relate to, especially if there is a student who had trouble understanding it. In this case, the teacher needs to be sure that the students are explaining the concepts correctly. The teacher should also try to reduce test anxiety by helping students develop their test-taking skills. Along with this, the teacher needs to be aware of some of the warning signs that panic about mathematics is about to set in.

2.1.4 Causes of Mathematics Anxiety

Mathematics anxiety is a genuine and inescapable problems, particularly locally school setting. Students are inclined to encounter mathematics anxiety in numerous structures and degrees, from freezing up during a numerical test, to endeavoring to stay away from whatever has to do with numbers or computations. The side effects of it could be physical or mental. The actual indications may incorporate sickness, windedness, perspiring, heart palpitations and expanded circulatory strain. While a portion of the mental indications may incorporate cognitive decline, loss of motion of thought, loss of self-assurance negative self-talk, mathematics aversion and separation (thinking you are the one in particular who encounters it). These manifestations and other negative mathematics encounters may prompt an endless loop in which dread of mathematics meddles with learning mathematics which prompts more bad number related encounters (Preis and Biggs, 2014).

It was clarified by (Blazer; 2011) that mathematics anxiety happens in an unpredictable style, coming about because of a blend of individual, scholarly, and ecological elements originating from numerous long periods of negative encounters. Individual elements present as low confidence, dissatisfaction not effortlessly dealt with, and different degrees of modesty, while scholarly factors incorporate students absence of capacity to see how to deal with mathematics ideas. Environmental factors, according to (Blazer; 2011) come from different home, classroom, and social circumstances, like requesting or undemanding guardians, negative school encounters, over accentuation on remembrance and dreary worksheets, ineffectively prepared instructors, inadequately composed course books, peer pressure, and inordinate school nonattendances. Every one of these components can cause different degrees of anxiety for students.

In the book overcoming mathematics anxiety by (mitt, 2012) presents a bunch of ecological components that numerous young ladies are presented to that may impact their elevated anxiety. (Ashcraft and Humbree in Wei, 2016 p 10) have demonstrated that despite the fact that factors that cause students to feel restless while facing Mathematics isn't yet resolved, yet students with higher Mathematics anxiety show a solid inclination to try not to learn Mathematics , they hold negative perspectives towards Mathematics, and have feeble self-assurance in doing Mathematics . Moreover, (Geist; 2014 p.24) says that as a general rule, there is minimal exact exploration about the reasons for Mathematics anxiety and Newstead (2017) says it's anything but not a simple assignment to decide the reasons for Mathematics anxiety, where and how it starts and develops. Along these lines the essential point of this examination then, at that point is to research the perception of students and teachers on the reasons for Mathematics anxiety among students of senior secondary school. Thus, out of many causes of mathematics Anxiety below are some of causes of it.

i. **Teachers Attitude toward Mathematics**

There are numerous things the mathematics teachers can do that will provoke his students to dislike mathematics. The teacher might be seen as not thinking often about students since he is reluctant to give additional assistance to students who need it. The need to realize that their teacher is capable and able to help them. The instructor may lose control or baffled when his class doesn't comprehend the issues. The teacher may likewise have unreasonable assumptions for his students. Covering the course reading issue by issue can divert students off from learning mathematics. Additionally, giving composed work each day, demanding there is just one right approach to finish an issue, and appointing mathematics issues as discipline for trouble making can make students despise mathematics (Furner and Berman, 2013). Nobody appreciates discipline. Making students to do mathematics as a type of control could almost certainly make students disdain mathematics.

ii. **Teaching Method**

Another significant sources of mathematics anxiety is the showing approach of "explain practice-memorize" (Steele and Alfred, 2014). The mathematics teacher should be creative in his showing strategies, so students don't lose interest. This thought is upheld by an investigation led by Pyne, Bates, and Turner (2012). They showed elementary mathematics to students who didn't arrive at the base necessities to be selected a course they required. The analysts confirmed that these students would be inclined to having negative sensations of mathematics. To battle these sentiments, they chose to focus on utilizing diverse showing styles, strategies for evaluation, and backing meetings. They urged an analytical way to deal with mathematics. They needed their students to do mathematics as opposed to paying attention to or watching the instructors do it. The teacher wanted the students to

settle on their own choices about what mathematics they required. They energized thinking numerically, and they utilized an assortment of visual guides. Rather than the typical paper and pencil test, they utilized ceaseless appraisal. The students were soothed when informed that there would be no composed tests. The class had a sum of twelve instructors for just eleven students, so there were a lot of individuals to help the students when they were experiencing difficulty understanding. This was particularly helpful when the students were performing open finished assignments. Generally speaking, the students partook in the informal setting. They left the class feeling more certain about their own numerical capacity and their utilization of mathematics. This model shows the impacts that contrasting showing styles can have on students\' perspectives towards mathematics.

iii. **Previous Knowledge of Students.**

Previous knowledge on students is one viewpoint that students apparent to be one of the reasons for mathematics anxiety. It implies the earlier information on students on mathematical content. Students fundamental information on mathematics in their lesser auxiliary level is one of the key factors that decided their great presentation of it in senior secondary school. Students who need adequate past information on mathematics might not have any desire to learn and couldn't get accomplishment in the resulting levels. It is liable for students disappointment in mathematics in all optional school level (Bed Raj Acharya; 2014). He further focused on that; students with lacking past numerical information can't absorb new numerical idea and rule that are identified with the already ones intended to be learned. A mathematics instructor got some information about their past information to a theme yet the whole understudy stayed quiet and no one responded to the inquiry. One of the students\ said that she objected to learning mathematics in her lower auxiliary level. This has really made her not to jump at the chance to learn mathematics in any event, when confronted with numerical issue. A senior expert said that the greater part of the students

that were advanced in the subject of mathematics at lower level without idea of mathematics, it become hard for them to perform well in mathematics. Essentially, the mathematics teacher said that in the lower (junior) secondary, mathematics educational program did exclude the adequate fundamental idea of mathematics these cause the students to feel mathematics to be so new and troublesome subject as they go further. (Interview recorded by Bed Raj Acharya; September, 2014)

iv. **Pear Group**

Students can encounter Mathematics anxiety even in a relaxed environment, that is, outside a Mathematics classroom circumstance, for example when taking care of issues in their regular daily existences which includes the control of Numerical thoughts or when talking about issues to do with Mathematics .

Indeed, even those that drive forward may find that they are segregated from peers who share a premium in mathematics, coming up short on an individual they can learn mathematics familiarity with, outside of a potential parent. Truth be told, Geist (2014) theorizes that the expanded incitement from an all the more numerically slanted home climate is an essential explanation that parent schooling is so profoundly associated with achievement in mathematics , inferring that numerous kids might be left for the most part without somebody to talk with numerically.

v. **Personality Factors**.

At an early age, almost every individual starts to figure out how to count. As we develop and enter school, we start to figure out how these numbers can be controlled to make what is perceived as mathematics. Research relating to ability advancement and techniques to further develop learning and execution, especially concerning mathematics abilities, has been filling because of the 21st century quickly advancing mechanical world. Mathematics

abilities are fundamental for expanding people cooperation in the public arena and their achievement in regular day to day existence (Maloney, Risko, Ansari, and Fugelsang, 2015). The improvement of mathematics abilities is additionally basic to guarantee proceeded with headways in mathematics and innovation. Regardless of its importance for people and society, a few people love mathematics while others despite it. Indeed, it is entirely expected in today's society to experience people who have a dread of mathematics and numbers. These people have what is ordinarily alluded to as mathematics anxiety.

Early research focused on the Trait and State model of anxiety proposed by Speilberger (2009; as cited in Isiksal, Curran, Koc Gary and Askun, 2011). Following this model, a few articulations of anxiety were believed to be related with singular qualities (i.e., character attributes and additionally contrasts) that expanded a people weakness to anxiety. Then again, different articulations of anxiety were believed to be related with explicit states or circumstances where people accept they are confronting a hazardous circumstance causing excitement of the autonomic sensory system and a pessimistic passionate response (Isiksal et al., 2016).

personality factors corporate hesitance to pose inquiries because of timidity, low confidence, absence of certainty, and the impact of past adverse encounters with mathematics or; the intrinsic characteristics like inability to normally capable at mathematics which fills a feeling of deficiency (Adelson, 2014) Since mathematics demands correct answers, it may bring about more anxiety over making mistakes compared to reading and understanding (Menon, 2012). In the case of other students, factors such as the fear of not finishing a timed test, being placed in mathematics courses above level of competence, or feeling not in control of one's life situation, can also contribute to one's math anxiety (Diaz, 2014).

vi. **Parental Factor**

Parent play a fundamental part in their children education. The house is the primary spot of figuring out how to the students before the school. The part of instructing students isn't just hanged at the neck of educators, it is likewise the obligation of their folks to make mindfulness, interest and information about dealing with and directing their children at home. Parent can likewise acquaint and show esteems with their children relying upon the level of their schooling. Ignorant parent don't know significant of mathematics information in his life and along these lines can't drive the kid to learn mathematics (Bed Raj Acharya; 2014).

Parent can fill in as the sources or reasons for mathematics anxiety to their children since they assume a significant part in the improvement of people (Gunderson, Ramirez, Levine, and Beilock, 2012) and in giving instructive encounters to students (Geist, 2010). A few parent are acceptable at mathematics and set elevated standards for their kids in mathematics. They push their children to prevail in the subject by mentoring them and, some of the time, by contrasting them and different kin or friends who dominate in mathematics. The unfortunate results of parent elevated requirements in mathematics are that the youngster may become restless about mathematics (Bekdemir, 2010).

Aside from having exclusive requirements for their children in mathematics, a few parent generalization mathematics as a male space and accept that young men are preferred in mathematics over young ladies. This suggests that the achievement of young men in mathematics is because of regular gifts while young ladies achievement is a consequence of difficult work (Gunderson et al., 2012). Contrasting attributions to accomplishment in mathematics by parent could bring about young men habitually getting special treatment during mathematics time (Geist, 2014). Besides, parent are probably going to give greater

support and mathematics related exercises for their children than for their little girls, bringing about respectful treatment of young men and young ladies. As per Gunderson et al. (2012), differential treatment by parent could be social in nature (e.g., young ladies are scorned when they request help) or it very well may be intellectual in nature (e.g., young men are given more troublesome mathematics inquiry to address, which thus could bring about young men performing at significant levels in mathematics.

Furthermore, students from groups of low financial foundation are in a difficult spot in mathematics since they are not regularly furnished with the additional backings at home or locally to succeed (Geist, 2014).

vii. **Socio-economic Status of Parents**

Financial status of parent is likewise seen to be one among the causative components of mathematics anxiety among secondary school students. The beginning stage of mathematics anxiety among secondary school students is in all likelihood brought about by friendly impacts and psychological inclinations. In intellectual inclinations, an understudy will have negative perspectives towards mathematics in the future as they progress throughout everyday life in the event that they are inadequate in their abilities. Psychologically inclined students are more helpless against negative social impact at their tens ages (Maloney and Beilock, 2015).

Financial status of parent decides the training standard of their children. Numerous writing shows that the monetary status of the parent straightforwardly influences the Childs learning. Students, whose parent monetary condition is acceptable, generally have sound schooling on the grounds that their folks can oversee coach at home however much as could be expected which is hard to track down in helpless family (Bed Raj Acharya; 2014). To affirm this, he directed a meeting with a gathering of students on the impact of parent

financial status to their presentation. A respondent said that his family financial condition is poor as such he can't take additional exercises for mathematics; this made the understudy to be less inspired by mathematics as subject. A mathematics educator additionally upheld the view in regards to financial state of the parent as a factor toward students reasons for mathematics anxiety. This teacher said that occasionally he directs an additional class for weak students however the greater part of the students scarcely go to because of absence of educational expense. Similarly a school overseer answered that the majority of the students in the school were from low financial base and clueless family foundation. The kids from these families are consistently occupied with family work as opposed to doing schoolwork after school, so they become frail in mathematics and they will undoubtedly pick other subject since they cannot do well in it. On a similar matter, a parent said as their financial aspects condition is low a direct result of customary horticulture framework. Their children are limited to help them on the ranch. This scoured the kids valuable and adequate chance to learn mathematics. Likewise as a result of their economy they couldn't have the option to deal with their children educational expenses for additional class (Meeting recorded by Bed Raj Acharya; 27 September, 2014). Social impacts may be from peer happening when different students snicker at them over mathematics conversations.

viii. **Students Nonchalant Attitude towards Mathematics**

Nonchalant attitude that students displayed toward mathematics is additionally a key factor that frantic students to perform ineffectively in mathematics, there by having anxiety towards learning mathematics.

Mathematics is a subject that needs steady or customary practice since it has different theory and several formula that need to be mastered. By and large mathematics accomplishments decide students work in current circumstance; students are not arduous in

mathematics learning. In this manner, their accomplishment is less and execution isn't true to form thusly nervousness is being made (Bed Raj Acharya; 2014). He further focused on that students work is liable for their presentation in mathematics following a meeting of some mathematics educators. A portion of the mathematics teacher say that students don't attempt to learn mathematics and don't have any desire to do additional work to learning it. They like to connect with themselves in an unnecessary task even in the homeroom during learning measure.

Mathematics is more complex to comprehend than some other subject that require more opportunity for drill and practice. But students don’t will in general be unserious toward it. Actually students didn't give more opportunity to learn mathematics as such when confronted with mathematics on account of their ineptitude of it become restless towards it.

2.1.5 Causes of Poor Academic Performance

1. Slothfulness

2. Improper timetable

3. Inadequate study time

4. Financial constraint

5. Lack of study materials

6. Broken home

7. Doubt

2.1.6 Solutions to Poor Academic Performance

1. Government should be able to provide supports for students from a poor background like grants, scholarships, etc. This will assist students in this category to remain focus.

2. Teachers should be student focus rather than being content minded.

3. Parents should try to live in harmony at least for this sake of their child. This will help them to be psychologically stable.

4. Qualified teachers should be employed by schools for quality teaching.

5. Conducive environment for learning should be provided by schools.

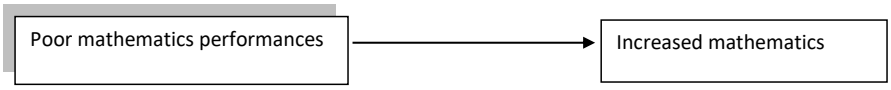
6. Students should be ready to learn, attend class regularly, and be inquisitive in class.

7. Group reading among students should be encouraged.

2.2 Theoretical Framework

2.2.1 The Deficit Theory

The theory suggests that people who start out with poorer mathematics performance are more likely to develop anxiety in mathematics, as summarized in the following diagram.



For example, studies have suggested that children with mathematics learning disables such as developmental dyscalculia (which causes reduced mathematics performance) have higher levels of mathematics anxiety than children without mathematics learning disabilities. Longitudinal studies (such which follow children over the longer period of their development than most studies, which only provide a snapshot at a specific time

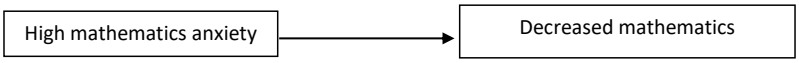
period) also suggest that decreased performance in mathematics might be linked to higher mathematics anxiety in the following year.

Furthermore, it has been suggested that adults with mathematics anxiety might have problems with basic numerical processing(number sense) indicating that perhaps their performance was impaired at a very early stage (i.e. before they developed mathematics anxiety). Genetic evidence has also been found which indicates that some of the explained by gene which affect a person's mathematics performance.

However, this research is not definitive. Whilst it might suggest that some individuals develop mathematics anxiety as a result of poorer mathematics performance, not all individuals with mathematics anxiety have any history of a performance deficit. Nor is it a case that all individuals with difficulties in mathematics go on to develop mathematics anxiety. In addition, other research suggests that the link between mathematics anxiety and performance can be driven in the other direction.

2.2.2 The Debilitating Anxiety Model

The debilitating anxiety model suggests that the links between mathematics anxiety and mathematics performance is driven by anxiety's devastating consequences on learning and recalling mathematics skills, as summarized below



Mathematics Anxiety may have an effect on mathematics performance at several different levels. Firstly, evidence suggests that people with mathematics anxiety are less willing to engage with mathematics task at all. For example, people with mathematics anxiety are less likely to enroll in mathematics classes, and have a tendency to answer questions quickly but in accurately (perhaps due to "escape" the anxiety – including mathematics

situation). This suggests a tendency towards mathematics avoidance in those with mathematics anxiety, which have a negative impact on both learning opportunities and recall in tests.

Secondly, whilst individuals are engaged in mathematics tasks, mathematics anxiety might acts to distract them from what they are trying to learn or remember. The idea that anxiety could interfere with learning and recall is known as 'cognitive interference' – anxiety generate distracting thoughts and sensation which affect memory capacity. This idea is supported by evidence suggesting that those working memory (memory used to store, process and manipulate information), and that those with mathematics anxiety do especially poorly in questions which require a high level of working memory to solve.

The idea is that mathematics anxiety reduces mathematics performance, then both by reducing engagement with mathematics tasks and by making these mathematics tasks harder to solve by reducing working memory capacity. There is some evidence that the relationship between mathematics anxiety and performance does operate in this direction. For example, studies which elevate mathematics anxiety in specific individuals (for example, by making women conscious of gender stereotypes about women being bad at mathematics) find that this decreases mathematics performance. Other studies have people do a task aimed to reduce mathematics anxiety and have observed an immediate performance increase.

2.3 Review of Related Literature

The review of related literature is an essential aspect of investigation. This helps the researcher to gather up to date information about what has been done in the particular area on which he intends to study. Review of related studies further avoids duplication of effort that has already been done and if helps the investigator to go further deep into the problem

in hand. If also helps to study the different facts of the problem. It provides the opportunity of giving an insight into the methods measures and various other parameters adopted by other, which would lead to the improvement of the research design significantly. It is a valuable guide in defining the problem recognizing its significance suggesting the promising data gathering devices appropriate study design and source of data.

Subrata (2007) conducted a study on academic achievement in mathematics in relation to cognitive styles and attitude towards mathematics. The boys and girls differed significantly on all the three measures under consideration. The field independent boys excelled over the field dependent boys significantly in their achievement in mathematics. Similarly, field independent girls also excelled over the field dependent girls significantly.

In Shahapur (2014), a study on self-confidence, anxiety, study habits and mathematics achievement of underachievers at secondary school level. The main objective of the study was to study self-confidence, general anxiety, test anxiety, and study habits in relation to underachievers in mathematics at secondary school level. Survey method was adopted in the study. The findings were, there is significant difference between normal achievers and underachievers in respect of their self-confidence; there is significant difference between normal achievers and underachievers in respect of their general anxiety; there is significant difference between normal achievers and underachievers in respect of their test anxiety mathematics; there is significant difference between normal achievers and underachievers in respect of their study habits; there is significant difference between normal achievers and underachievers in respect of their mathematics achievement.

Roty & Michael (2013), conducted a study on the relationship between mathematics anxiety and emotional intelligence. This study examined the relationship between mathematics anxiety and emotional intelligence. The results suggest that students would

benefit from having access to emotional intelligence coaching. Experiments of the effect of emotional intelligence coaching on mathematics anxiety should be conducted furthermore; studies are needed to examine the relationship between mathematics anxiety and emotional intelligence in populations not represented in this study.

2.4 Summary of Related Literature

All the authors whose works were reviewed have the same view about the causes and effects of mathematics anxiety in secondary school. They are identifiable physical objects which carry information that can promote learning. The study reviewed concept of mathematics anxiety, nature of mathematics and anxiety, causes of mathematics anxiety among students in secondary school and also the effect on students' academic performance. Findings of the study also reviewed that mathematics anxiety is a real problem facing students, teachers, and parents. Students who have mathematics anxiety face real and long-lasting consequences. Thankfully, there are real methods that teachers and parents can use to help students overcome their mathematics anxiety. There are also ways of helping students realize their own mathematics anxiety and work toward overcoming it. A better understanding of mathematics anxiety is needed in order to help students overcome this problem. The more research is done, the more students, teachers, and parents will be able to work together to overcome this problem. As methods are found that help prevent and reduce mathematics anxiety, the ideas and information should be shared so others can benefit from it as well. Mathematics is an extremely important subject and it is vital that students succeed in it.

As the results of this study the researcher have confirmed, Mathematics anxiety is not caused by single factor but by a combination of several factors. This study therefore

concludes that the causes of Mathematics anxiety among senior secondary school students into four categories.

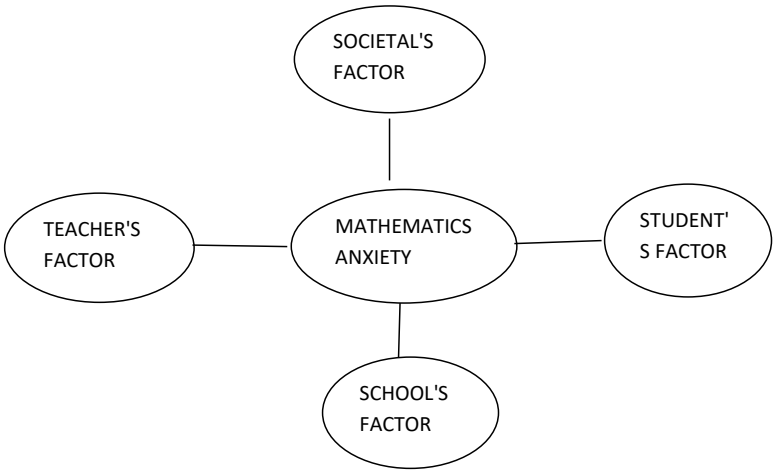


Figure 2.1

A Schematic Diagram Showing the Causative Factors of Mathematical Anxiety among Senior Secondary School Students.

Figure 2.1 show the diagrammatic relationship of concepts or components to a circle at the center as its body. These circles are the factors that cause Mathematical anxieties experienced by senior secondary school students.

The first circle at the top contains society factors which could be in the form of belief and myth of the society as the cause of mathematics anxiety. The second circle downward refers to school factors which include poor teaching and learning environment. The third circle to the right represents students' factors which can be a negative attitude towards

learning mathematics while the last circle refers to teachers' factor which may result from poor teaching method or attitude of teacher to student

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The research design adopted for the study is descriptive survey. Descriptive survey are concerned with studying the state of affairs of a given situation or population with similar characteristics using appropriate sample. It is more appropriate to gather variety of data related to the study used in Education (Kolo, 2003). It was design to investigate the perception of students on the causes of mathematics anxiety in senior secondary school in Bosso Local Government Area, Niger State.

3.2 Population of the Study

The target population of the study comprised of three thousand one hundred and twenty (3,120) student in all the senior secondary school among twenty-two (22) Government secondary school in Bosso local government area of Niger state.

3.3 Sample and Sampling Techniques

The representing samples of (SS 2) mathematics student from six (6) different secondary schools were made. Simple random sampling was used to select three hundred and twelve (312) students from six selected secondary schools, which is the ten percent (10) of total population of the study.

3.4 Research Instrument

The instrument were developed by the researcher for the data collection. Questionnaire items were constructed to afford answer to the research question formulated to guide the study. The questionnaire consists of two sections. Section one sought information on personal data while second sections contain twenty (20) items structure to provide answer to the major research question. Five (5) point scale rating of Strongly Agreed (SA), Agreed (A), Undecided (U), Disagreed (D), and Strongly Disagreed (SD) with value 5,4,3,2, and 1 respectively with 3.0 as the mean.

3.5 Validation of Research Instrument

The instrument was validated by two Lecturer from Science Education Department and one Lecturer from Industrial and Technology Education Department. They all examined the instrument in terms of level of language of expression, ambiguity, duplication of statement, relevance of items to research purpose and research questions and the adequacy of the items among others. The comments and suggestions of the Validates were used in the production of the final copy of the instrument for data collection.

3.6 Reliability of the Instrument

A pilot test was conducted in one of the secondary schools within the study area, excluded from the six sample schools. The instrument was tasted using Fourth (40) SS2 students in the school. The administered questionnaire was collected back and analyzed by applying Cronbach Alpha formula and reliability coefficient of r = 0.72 was obtained for the items. This value obtained as indicated by Akande et. al (2009) were reliable, they said that an average reliability coefficient is said to be 0.5. Below 0.5 is not reliable, indicate that the items need to refine in the study.

3.7 Method of Data Collection

The researcher visited the selected schools for the research and seeks for permission from the school authority for the collection of data. The researcher was introduced by the school authority to the students and staffs of the school. The questionnaires were administered to the students from the selected schools in the area of study by researcher. The students were required to fill the questionnaire on the spot, and it was collected back from them by the researcher for data analysis.

3.8 Method of Data Analysis

The data collected in the study were analyzed using mean and standard deviation to answer the research question. The responses from the respondents were compared, classified to the number of items in the questionnaire for each research question.

CHAPTER FOUR

4.0 RESULTS AND DISCUSSION

The aim of this research is to discover the perception of students on the causes of mathematics anxiety in senior secondary school. This chapter includes the result of the procedures used to answer the three research questions. The data generated were gathered and tabulated. The research questions were answered using mean and standard deviation. In answering the research questions, any item with response mean within 3.00 and above was accepted while any below 3.00 was rejected. The data is analyzed as follows.

4.1 Bio-Data of Students

Table 4.1.1 Gender Distribution Table

Gender	frequency	percentage	Cumulative percentage
Male	144	46	46
Female	168	54	100
Total	312	100	

Table 4.1.1 shows the gender distribution of the students respondents. From the table we can see that male has the frequency of one hundred and fourth (144) respondents which represent 46% of the population, while the female had the frequency of one hundred and sixth eight (168) which is equivalent to 54% of the total population

4.2 Research Questions

4.2.1 Research Question One

What is the perception of students on the causes of mathematics anxiety based on student's factors in senior secondary school?

Table 4.2.1: Mean and Standard Deviation of Students Factors causing mathematics Anxiety

S/N	Items	N	Mean	Sd	Decision mean
Q1	Students' negative attitude towards mathematics leads to mathematics anxiety among students.	312	3.72	1.16	Agree
Q2	Negative peer influence causes mathematics anxiety among students.	312	3.46	1.30	Agree
Q3	Students' poor mathematics background causes mathematics anxiety among students.	312	3.03	1.54	Agree
Q4	Students career choice lead to mathematics anxiety among students.	312	2.88	1.53	Disagree
Q5	Students' inability to solve complex mathematical problems results to mathematics anxiety among students.	312	3.47	1.22	Agree
Q6	my discourage in mathematics class causes Anxiety	312	3.46	1.24	Agree
Q7	Students worries of not getting good grade in mathematics causes Anxiety	312	1.92	0.26	Disagree
Q8	Students worries when writing mathematics exams causes Anxiety	312	3.21	1.31	Agree
Q9	I am more comfortable when I am discussing with my classmates who are afraid of mathematics like me	312	3.71	1.22	Agree

Q10	I am fearful about being asked to go to the board to explain or solve a problem or do any mathematics work	312	3.58	1.22	Agree
Score	**Grand mean**		**3.24**		

Decision mean 3.0 ***source: Research Filed Work (2021)**

Table 4.2.1 shows that items 1-10 are Student factors that causes of mathematics anxiety among students, hence items that has response mean greater than the instrument scale mean of 3.0 are considered accepted while items that has response mean less than the instrument scale means of 3.0 are considered rejected, Thus, Since the grand mean of 3.24 is higher than the scale mean which implies high perception of those items as causes of mathematics anxiety among students

4.2.2 Research Question Two

What is the perception of students on the causes of mathematics anxiety based on Societal Factor in senior secondary school?

Table 4.2.2: Mean and Standard Deviation of Societal Factors causing Mathematics Anxiety

S/N	Items	N	Mean	Sd	Decision mean
Q1	Society belief that mathematics is a difficult subject also contribute to the causes of mathematics anxiety among students.	312	4.08	1.30	Agree
Q2	The requirement of mathematics in all levels of education causes mathematics anxiety among students.	312	1.36	0.57	Disagree
Q3	The thought that Mathematics is a subject for the brilliant causes mathematics anxiety among students.	312	3.18	1.30	Agree
Q4	limited career choices available in mathematics in the society causes mathematics anxiety among students	312	1.36	1.22	Disagree
Q5	The society believes that mathematics is abstract and doesn't really have a direct or obvious application this causes anxiety to students.	312	3.78	1.22	Agree
Q6	I don't see Mathematics relevant to everyday life and society	312	3.26	1.22	Agree

Q7	Society belief that Only male students are qualified to learn Mathematics	312	3.99	1.16	Agree
Q8	Society belief that mathematics lessons are boring	312	3.15	1.32	Agree
Score	**Grand mean**		**3.02**		

Decision mean 3.0 ***source: Research Filed Work (2021)**

Table 4.2.2 shows that items 1-8 are societal factors that causes of mathematics anxiety among students, hence items that has response mean greater than the instrument scale mean of 3.0 are considered accepted while items that has response mean less than the instrument scale means of 3.0 are considered rejected, Thus, Since the grand mean of 3.02 is higher than the scale mean which implies high perception of those items as causes of mathematics anxiety among students.

4.2.3 Research Question Three

What is the perception of students on the causes of mathematics anxiety based on school Factors
in senior secondary school?

Table 4.2.3: Mean and Standard Deviation of School Factors Causing Mathematics Anxiety

S/N	Items	N	Mean	Sd	Decision mean
Q1	Non conducive learning environment causes mathematics anxiety among students.	312	3.44	1.19	Agree
Q2	Absence of mathematics laboratories for practical work in school causes mathematics anxiety among students.	312	1,98	0.18	Disagree
Q3	Lack of reading materials in mathematics causes mathematics anxiety among students.	312	4.06	1.10	Agree
Q4	Overcrowded class causes mathematics anxiety among students.	312	3.09	1.49	Agree
Q5	Time allocated to mathematics in a day causes mathematics anxiety.	312	3.84	1.09	Agree
Q6	The use of traditional teaching method causes mathematics Anxiety	312	3.60	1.11	Agree

Q7	Abstract nature of mathematics causes Anxiety	312	3.04	1.12	Agree
Score	**Grand mean**		**3.22**		

Decision mean 3.0 ***source: Research Filed Work (2021)**

Table 4.2.3 shows that items 1-7 are Schools factors that causes of mathematics anxiety among students, hence items that has response mean greater than the instrument scale mean of 3.0 are considered accepted while items that has response mean less than the instrument scale means of 3.0 are considered rejected, Thus, Since the grand mean of 3.22 is higher than the scale mean which implies high perception of those items as causes of mathematics anxiety among students.

4.2.4 Research Question Four

What is the perception of students on the causes of mathematics anxiety based on teacher's factors in senior secondary school?

Table4.2.4: Mean and Standard Deviation of Teachers Factors Causing Mathematics Anxiety

S/N	Items	N	Mean	Sd	Decision mean
Q1	Teachers' inability to break down concept into simple and understandable units results to mathematics anxiety among students.	312	3.30	1.28	Agree
Q2	Poor teacher-student relationships cause mathematics anxiety among students.	312	3.56	1.40	Agree
Q3	Harshness or strictness of a teacher to students causes mathematics anxiety among students.	312	3.63	1.23	Agree
Q4	Nonuse of instructional materials while teaching causes math anxiety among students.	312	2.98	1.22	Disagree
Q5	Teachers' self-efficacy in solving mathematical problems causes mathematics anxiety among students.	312	3.37	1,09	Agree
Q6	My worst moment is when the teacher ask us to work in groups in mathematics class.	312	3.43	1.31	Agree
Q7	My mathematics teacher always shouts at me when I don't answer a question correctly	312	3.00	1.31	Agree

Score	**Grand mean**	**3.32**
Decision mean 3.0		***source: Research Filed Work (2021)**

Table 4.2.4 shows that items 1-7 Teachers' are factors that causes of mathematics anxiety among students, hence items that has response mean greater than the instrument scale mean of 3.0 are considered accepted while items that has response mean less than the instrument scale means of 3.0 are considered rejected, Thus, Since the grand mean of 3.32 is higher than the scale mean which implies high perception of those items as causes of mathematics anxiety among students.

Discussion of Finding

From the results and the analysis, revealed that the perception of students on the causes of mathematics anxiety among senior secondary school students, items that were measured ranging from the societal, school, teacher' and students, factors were all accepted as the causes of mathematics anxiety except question 4, and 7 in student factors, question 2 and 4 in societal factors, question 2 in school factors and question 4 in Teacher factor. The grand means of students perception toward Mathematics Anxiety is **3.24, 3.02, 3.22 and 3.32** respectively which is accepted since is higher than the decision means of **3.0.** That is to say society, school, teachers and even the students themselves causes anxiety for themselves.

Summary of the Finding

The general purpose of this study was to determine perception of students on the causes of Mathematics Anxiety Among senior secondary school. The researcher was interested in finding out the boundaries disrupting the general flow of learning Mathematics at Senior secondary School. A questionnaire measuring mathematics anxiety was used to determine the level at which senior secondary students felt about mathematics and various test decision were utilized to test the performance of the student. Thus, findings reveal that;

- ❖ Students' negative attitude towards mathematics leads to mathematics anxiety among students.
- ❖ Society belief that mathematics is a difficult subject also contribute to the causes of mathematics anxiety among students.
- ❖ Lack of reading materials in mathematics causes mathematics anxiety among students.
- ❖ Harshness or strictness of a teacher to students causes mathematics anxiety among students.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 **Summary**

The general essences of this study was to decide the perception of students on the causes for mathematics Anxiety in senior secondary school.

Results from the discoveries have shown that the students both males and females have positive perception of the elements that causes mathematics Anxiety among secondary school students. These variables that cause mathematics Anxiety were group into four factors that included societal factor, school factors, Teachers factors and student's factors.

The general public play a part in making mathematics Anxiety students as in they accepted that mathematics is a hard subject, the high prerequisite of mathematics in all level of education and they accepts that mathematics is for the brilliant students. They likewise accepted that there is no much career opportunity accessible for anybody that study mathematics in particular, they also accept that mathematics is dynamic as such it make mathematics Anxiety to students.

The school add to the causing of mathematics Anxiety among students in that there is no favorable learning environment, absence of mathematics laboratory that students can go in

to see real application of the mathematics, there are insufficient perusing materials for these students to counsel all alone, a few classes are stuffed and the time normally allocated to mathematics exercise in a day makes Anxiety to students.

Teacher additionally prompt mathematics anxiety to students because of failure to breakdown idea into straightforward and reasonable units, poor Teacher-students relationship, some teacher are unforgiving or potentially severe to their students, nonuse of instructional materials while educating and the level of Teachers certainty to tackle mathematical issues all makes mathematics Anxiety to students.

The students all alone were not left out as one of the causative factor that causes mathematics Anxiety for themselves. The discovering discovered that students have negative attitude toward mathematics, their parent high demand on their mathematics performances, student's poor mathematics foundation, profession selections of students and the student's failure to tackle mathematical issues causes mathematics Anxiety among them.

5.2 Major Finding of the Study

i. There was positives perception of students on the causes of mathematics anxiety based on students factor in senior secondary schools?

ii. There was positives perception of students on the causes of mathematics anxiety based on school factor in senior secondary schools?

iii. There was positives perception of students on the causes of mathematics anxiety based on Teacher's factor in senior secondary schools?

iv. There was positives perception of students on the causes of mathematics anxiety based on societal factor in senior secondary schools?

5.3 Conclusion

The finding of the studies reveal components that add to the causes to mathematics Anxiety among secondary school students as the general public, the school, the Teacher and the students as seen by the students. Thus, from the results of the study it was discovered that with the teachers' commitment, motivation of student, gender equality in teaching and availability of laboratory equipment will go a long way in the improvement of students perception of toward mathematics Anxiety

5.4 Recommendations

Base on discovery of this finding, the following recommendation were made:

1) Since self-efficacy and anxiety could influences students scholastic exhibition, it is suggested that the school give program that would build self-efficacy and decline anxiety in mathematics to improve the scholarly exhibition in mathematics of the students

2) Mathematics Teacher ought to be re-trained occasionally to have thoughts of creative methodologies of instructing mathematics to try not to cause Anxiety among students.

3) The general public ought to be re-orientated on the significance of mathematics and the job it plays to the public improvement of any country.

4) Laboratory and sufficient perusing materials ought to be given in each schools so as students can learn mathematics through practical and further additional needs.

5) Teacher should show eagerness about the subject in other to win the hearts of the students.

6) Counselling units ought to be given in secondary schools to re-direct student's mind-set about mathematics telling them the significance and value of mathematics in their life endeavors.

7) Schools' administration and parents ought to give a favorable and a decent learning environment in schools were students can learn easily.

8) Mathematics Teacher ought to be re-trained on the turn of events and utilization of instructional or technological guides to find a place with the universe of innovation around.

9) Mathematics practical ought to be include in mathematics educational plan in order to reduce its dynamics to students.

10) A decent Teacher-students relationship ought to be empowered in schools so as the students can have the option to explain to the teacher what their problem is.

11) Students ought to be orientated on the career decisions accessible in mathematics so as students can have certainty of learning it.

12) Teacher should Re-stress the cycle of right or wrong answer and urge their students to legitimize their answers even on inaccurate reactions.

13) Teacher should give students less moving work to boost their confidences in their Mathematics ability.

14) Teacher should rehearse meta-teaching, that is, teacher ought to consistently think about their training particularly their technique for guidance.

15) Teacher should offer students abundant chance to ponder their answers.

16) Teacher and parent should fight to de-fantasy the legends held by the general public about Mathematics difficulty

17) Teacher ought to consistently utilize proper teaching techniques for their lessons.

18) Teacher should consistently choose proper instructional guides by utilizing students learning styles; these will improve love, getting, achievement and acknowledgment from the students.

19) Parents ought to adopt a decent emotionally supportive system for their children and not to simply send their kids for extra lessons without interview.

20) Parents and teacher ought to try not to communicate negative disposition about Mathematics.

5.5 Suggestion for Further Study

i. Similar study should carry out in other state of the Nigeria.

ii. Similar study should also carry out in other field of science.

iii. A large population of students could be used to make a strong authenticity of the finding.

iv. A private school could also be used.

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APPENDIX

QUESTIONNAIRE ON: Perception of Students on the Causes of Mathematics Anxiety in Senior Secondary School in Bosso Local Government Area, Niger State.

Dear Respondent,

You have been randomly chosen as a respondent in the above titled survey which is being undertaken as part of an educational research in partial fulfillment of the Bachelor of Technology Degree in Science Education of FUT Minna. Your cooperation in filling this questionnaire will ensure success of the study. Please feel free to indicate your choice by putting a tick in the checkbox before the answer you feel most appropriate. The responses will be for academic purposes only and will be treated with utmost confidentiality.

Thank You

Sir/ Ma

SECTION A: PERSONAL DATA

Name of school:……..

Gender: male ( ) Female ( )

Class:……

SECTION B:

Please kindly tick the appropriate column on your personal assessment whereas,

Strongly agree-SA, Agree-A, Undecided-U, Disagree-D and Strongly disagree-SD

PERCEIVE SOCIETAL, SCHOOL, TEACHERS AND STUDENTS' FACTORS CAUSING MATHEMATICS ANXIETY

	School factors	**SA**	**A**	**U**	**D**	**SD**
1	Students' negative attitude towards mathematics leads to mathematics anxiety among students.					
2	Negative peer influence causes mathematics anxiety among students.					
3	Students' poor mathematics background causes mathematics anxiety among students.					
4	Students career choice lead to mathematics anxiety among students.					
5	Students' inability to solve complex mathematical problems results to mathematics anxiety among students.					
6	my discourage in mathematics class causes Anxiety					
7	Students worries of not getting good grade in mathematics causes Anxiety					
8	Students worries when writing mathematics exams causes Anxiety					
9	I am more comfortable when I am discussing with my classmates who are afraid of mathematics like me					
10	I am fearful about being asked to go to the board to explain or solve a problem or do any mathematics work					
	Societal Factor					
11	Society belief that mathematics is a difficult subject also contribute to the causes of mathematics anxiety among students.					
12	The requirement of mathematics in all levels of education causes mathematics anxiety among students.					
13	The thought that Mathematics is a subject for the brilliant					

	causes mathematics anxiety among students.					
14	limited career choices available in mathematics in the society causes mathematics anxiety among students					
15	The society believes that mathematics is abstract and doesn't really have a direct or obvious application this causes anxiety to students.					
16	I don't see Mathematics relevant to everyday life and society					
17	Society belief that Only male students are qualified to learn Mathematics					
18	Society belief that mathematics lessons are boring					
	School Factors					
19	Non conducive learning environment causes mathematics anxiety among students.					
20	Absence of mathematics laboratories for practical work in school causes mathematics anxiety among students.					
21	Lack of reading materials in mathematics causes mathematics anxiety among students.					
22	Overcrowded class causes mathematics anxiety among students.					
23	Time allocated to mathematics in a day causes mathematics anxiety.					
24	The use of traditional teaching method causes mathematics Anxiety					
25	Abstract nature of mathematics causes Anxiety					
26	The use of traditional teaching method causes mathematics Anxiety					
27	Abstract nature of mathematics causes Anxiety					
	Teachers' Factors					
28	Teachers' inability to break down concept into simple and understandable units results to mathematics anxiety among students.					
29	Poor teacher-student relationships cause mathematics anxiety among students.					
30	Harshness or strictness of a teacher to students causes mathematics anxiety among students.					
31	Nonuse of instructional materials while teaching causes math anxiety among students.					
32	Teachers' self-efficacy in solving mathematical problems causes mathematics anxiety among students.					
33	My worst moment is when the teacher ask us to work in					

	groups in mathematics class.					
34	My mathematics teacher always shouts at me when I don't answer a question correctly					