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THE EFFECT OF MATHEMATICAL ANXIETY ON MATHEMATICAL PROBLEM SOLVING

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ABSTRACT

Mathematics is a discipline that can help students solve problems in many other disciplines. One of the causes of students' unsuccess in solving problems is when they experience stress in the ongoing mathematics learning process. This results in students not being able to accept and understand learning well so that problem-solving skills cannot develop which results in incomplete learning outcomes. This study aims to analyze the effect of anxiety on students' problem-solving abilities. Researchers will use the Systematic Literature Review (SLR) method to summarize and explain the relationship, collecting many important articles in the research according to the method described. The results of this study show that the effect of mathematical anxiety on problem-solving ability is negative. Based on the research that has been reviewed, it can be concluded that the higher the level of mathematical anxiety of students, the lower the level of students' problem-solving abilities, and vice versa. Math anxiety greatly affects students' problem-solving abilities. Therefore, as a teacher, it is important to pay attention and immerse students not to be afraid of mathematics, because learning mathematics is not as difficult as imagined.

Keywords: Math, Math Anxiety, Problem-solving

1. Introduction

Education is very important and cannot be separated from life. The importance of education makes it a benchmark for a nation's progress. A developed nation is a nation that has good quality human resources in terms of spirituality, intelligence and ability(Hiller et al., 2021). In accordance with graduate competency standards, learning targets include the domains of attitudes, knowledge and skills that are collaborated for each educational unit. The learning process is held in an interactive, inspiring, fun, challenging and creative manner. Mathematics is an important lesson to master.

Mathematics is one of the compulsory subjects in Indonesia which must be present in every educational unit from elementary school to university. According to Fauziah & Pujiastuti (2020) by studying mathematics, a person is trained to think creatively, critically, honestly and can apply mathematical knowledge in solving problems in everyday life and in other scientific disciplines considering that the curriculum mandates that mathematics is one of the subjects mandatory, it can be understood that mathematics has a very important role in the progress and development of science. Based on this nature, students are required to be able to understand and have adequate mathematical competence. However, as shown in research by Purwandari et al., n.d.; Saleh et al., (2018), Sugiatno et al., n.d.; Utami & Fuadilah (2018) that there are still students who experience mathematics anxiety, this shows that mathematics is still a frightening threat for students.

Anxiety is defined as a subjective experience of disturbing mental tension as a general reaction and inability to face problems or feel safe (Manapa, 2021) Because mathematics is a very important subject in formal education and is closely related to human life, mathematics is not an interesting subject for students . According to research by Rawani et al., 2019; Tanudjaya & Doorman, 2020 many students are afraid and face difficulties learning mathematics. Usually math problems become so complicated that it is difficult for students to solve them. In learning mathematics, students' mental condition is an important aspect to support the learning process. Mathematics anxiety (about oneself, about mathematics) determines

students' success in learning mathematics(Brady & Bowd, 2005).

Anxiety disorders are some of the most common mental health problems throughout the world for example in South Korea, China, Australia, Germany, Greece and the United States including Indonesia (Derİngöl, 2022)This anxiety disorder is called mathematics anxiety (Luo et al., 2009)Student anxiety, namely the level of student confidence in their abilities, influences mathematical learning abilities. Student mathematics anxiety is students' anxiety at their level, generality, and students' strengths in various activities and contexts in mathematics learning. Mathematics anxiety influences life choices, level of motivation, quality of functioning, resilience to adversity and vulnerability to stress and depression(Buckley et al., 2016).

Mathematics anxiety can manifest itself in many ways one of which is expressing an aversion to mathematics, or worry or anxiety that is simply caused by external pressure on the person in an examination situation. Manapa, 2021 describes mathematics anxiety as real situational stress experienced due to personal stress or worrying circumstances. Researchers have also found that math anxiety can affect people in various ways, eliciting cognitive, affective, or physical responses(Bicer et al., 2020).

Common symptoms of anxiety are divided into two consisting of; somatic symptoms and psychological symptoms. Somatic symptoms can be seen from the student's condition when excessive sweating, tension in the skeletal muscles (headaches, contractions in the back of the neck or chest, trembling voice, and back pain), hyperventilation syndrome (shortness of breath, dizziness, and paresthesia), gastrointestinal function disorders (no appetite, nausea, diarrhea and constipation), cardiovascular irritability (hypertension) Julya & Nur, 2022. Meanwhile, psychological symptoms consist of mood disorders (sensitive, irritable and easily sad), difficulty sleeping (insomnia and nightmares), fatigue and tiredness, loss of motivation and interest, unreal feelings, very sensitive to sounds, empty-headed (unable to concentrate and forgets easily), clumsy, clumsy, poor coordination, unable to make decisions, anxious, restless, unable to stay still, loss of self-confidence, tendency to do things repeatedly, disturbing doubts and fears, and continuously check everything that has been done(Prodromou & Frederiksen, 2018)

In research conducted by Azwar et al. (2017), according to an interview with an elementary school teacher, it shows that elementary school mathematics teachers rarely pay proportional attention to reducing students' anxiety levels. According to Wulandari (2023), some students experience stress and anxiety due to a lack of understanding of the material, lack of independent initiative to study and waiting for instructions. This causes students to be unable to develop an understanding of mathematical solutions in learning. Anxiety with reasonable intensity can be considered to have positive value as motivation, but if the intensity is high and negative, it can cause harm and can disrupt the physical and psychological condition of the individual concerned. Anxiety is considered an inhibiting factor in learning which can interfere with a person's performance of cognitive functions, such as concentrating, remembering, forming concepts and solving mathematical problems(Prodromou & Frederiksen, 2018).

Problem solving abilities are very important in mathematics, not only for those who will later study or study mathematics, but also for those who will apply it in other fields of study and in everyday life (Foley et al., 2017; Luttenberger et al., 2018). According to Luttenberger et al. (2018) Problem solving is a stage of thinking that is at the highest level among the 8 types of learning. The eight types of learning are signal learning, stimulus response learning, sequence learning, verbal association learning, discrimination learning, concept learning, rule learning, and problem-solving learning. According to Harahap & Surya (2017) mathematical problem-solving ability is a complex cognitive activity, as a process for overcoming a problem encountered and to solve it requires a number of strategies.

To gain the ability to solve problems, children must be trained in a structured manner through problem solving activities (Sevgi & Çaliskan, 2020). According to Tri Kurnia (2023) Problem solving is the focus of mathematics learning which includes closed problems with a single solution, open problems with non-single solutions, and problems with various ways of solving. explained that to improve the ability to solve problems, it is necessary to develop skills in understanding

problems, creating mathematical models, solving problems, and interpreting solutions.

Students can be able to solve mathematical problems if the learning process is carried out correctly. Learning that provides opportunities for students to have the ability to understand problems well, formulate problem solutions, carry out problem solving, review and make final decisions or the most effective alternative solutions (Putri Nabila Dafina et al, 2022).

However, the reality in the field reveals that students' abilities are still low because students do not usually think more creatively. Apart from that, another cause is that the teacher's teaching choices are inappropriate or monotonous, causing students to be afraid and not understand problem solving (Nurhidayati A et al, 2023). According to the research results of Zakiyah (2021), the results of interviews and observations with mathematics subject teachers provide information that students still experience obstacles in solving problems related to problem solving, namely difficulty translating the information in the questions into mathematical language or modeling problems into mathematical sentences. Teachers more often give routine questions to students in the form of ordinary practice questions which are often found in textbooks and are only used to train students to use procedures or methods that are being studied in class. As a result, students' problem-solving abilities are not honed because they are not used to working on problem-solving questions. Therefore, the government encourages learning in schools to lead to problem-solving learning. In the two cases above, we can conclude that the learning process in the classroom influences students' mental conditions and problem-solving abilities.

2. Research Methods

The method used in this research is the SLR (Systematic Literature Review) method. Researchers carry out this SLR by identifying, reviewing, evaluating and interpreting all available research. With this method, researchers systematically review and identify journals which in each process follow predetermined steps([John_W._Creswell], n.d.). To complete this research, researchers collected journal articles in the Google Scholar database with the help of the Publish or Perish application. Key words are Math Enxiety, Mathematical Problem Solving and their combination. The articles collected were only articles published in the period 2019 to 2023. From various articles, researchers selected 20 articles that were closely related to the keywords used. The next step, the researcher grouped the articles into two, namely articles related to Mathematical Enxiety and articles related to Problem Solving, both related to mathematics learning and learning outcomes in general. Metadata for these articles is tabulated in a table which includes the author's name, title, year of publication, journal name, type of research and research results. After that, the researcher reviewed and analyzed the article in depth, especially regarding the research results presented in the discussion and conclusion sections. At the end of the research, the researcher compares the findings presented in the article and provides conclusions.

3. Results and Discussion

Results Data

The results of the research data included in this literature review are an analysis and summary of documented articles related to mathematics anxiety and its effects, which are presented in the table below:

Table 1. Table of Research Results on Mathematics Anxiety

Peneliti dan Tahun	Jurnal
(Ikhsan, 2019)	De Fermat : Jurnal Pendidikan Matematika
(Hidayat & Ayudia, 2019)	Kalamatika: Jurnal Pendidikan Matematika
(Putri, 2020)	Jurnal ilmiah fakultas keguruan dan ilmu pendidikan
(Umayah, 2019)	GAUSS: Jurnal Pendidikan Matematika
(Diana, Marethi, & Pamungkas, 2020)	SJME (Supremum Journal of Mathematics Education)
(Adhimah & Ekawati, 2020)	Jurnal Cendekia: Jurnal Pendidikan Matematika
(Kusmaryono & Ulia, 2020)	Mosharafa: Jurnal Pendidikan Matematika
(Purwandari, Ekawati, & Tristanti, 2020)	Jurnal THEOREMS (The Original Research of Mathematics
(Zuraidah, Hariyati,	Jurnal Inovasi Pendidikan dan

Indah, & Yuniarti, 2020)	Pembelajaran Matematika
(Putri & Kurniasari, 2019)	Jurnal Penelitian Pendidikan Matematika dan Sains
(Juliyanti & Pujiastuti, 2020)	Prima: Jurnal Pendidikan Matematika
(Afifah, Fatah, & Rafianti, 2020)	Jurnal Pemikiran dan Penelitian Pendidikan Matematika
(Ni'mah, 2020)	Jurnal THEOREMS (The Original Research of Mathematics)
(Ansari & Saleh, 2019)	Jurnal Ilmiah Pendidikan Matematika
(Patmara et al., 2019)	Journal of Primary Education (S4)
(Yufa Ficanysha, Netrawati,Neviyarn, Nurfarhanah, 2023)	G-COUNS: Jurnal Bimbingan dan Konseling
(Altanchimeg Zanabazar, Amartuvshin Deleg, Magsar Ravdan, 2023)	Jurnal Ilmiah Peuradeun
(Almaz Mesghina, Elayne Vollman, Kelly Trezise, and Lindsey Engle Richland, 2023)	Journal of Educational Psychology
(Cinthia Venita Putri, Asih Miatun, 2023)	Prisma Sains: Jurnal Pengkajian Ilmu dan Pembelajaran Matematika dan IPA IKIP Mataram
(Thomas E. Hunt Erin A. Maloney,2023)	*Annals Of The New York Academy Of Sciences*

Discussion

Math Anxiety

In discussing mathematics anxiety, there are different levels of anxiety in students. Several factors can influence anxiety, one of which is a lack of student interest in mathematics lessons which can cause mathematics anxiety.

Based on the research results in Table 1 above, the factors that influence mathematics anxiety consist of particular and environmental factors(Fernández et al., 2021). Environmental factors can include pressure from family or school, while particular factors can be caused by weak intelligence, perseverance, self-doubt, difficulty understanding mathematical concepts, dyslexia, feelings of low self-esteem, uncontrolled frustration, lack of self-confidence, and feelings of shame(Ramirez et al., 2018).

Based on the results of research by Cavanagh & Sparrow (2010) which divides mathematics anxiety into three aspects, including the attitude aspect, the cognitive aspect, and the physical aspect. The station aspect is mathematics anxiety based on his attitude and views towards mathematics. The cognitive aspect is mathematics anxiety based on mathematical problem-solving abilities. Meanwhile, the physical aspect is physical mathematical anxiety when interacting with mathematics.

The first opinion regarding the meaning of mathematics anxiety is a feeling that often arises and is uncomfortable when faced with mathematical problems, where this feeling is related to anxiety and fear of mathematics(Casty et al., 2021). Another opinion is that mathematics anxiety is an emotional symptom that results in feelings of discomfort, fear, worry, anxiety, and feelings of depression in the process of learning mathematics(Luttenberger et al., 2018). Conditions such as mathematics anxiety occur in students who are not only related to mathematics learning at school but also related to all problems in daily life that are related to numbers (Setiani, 2018). Students will avoid things that make them anxious and afraid, including mathematics lessons. This is in line with the opinion that students who have high mathematics anxiety will avoid things related to mathematics(Manapa, 2021). Based on the definitions of mathematics anxiety above, it can be concluded that the definition of mathematics anxiety is a feeling of fear, anxiety, and worry in students regarding mathematics lessons.

The factors that cause mathematics anxiety in students are stated by Trujillo & Hadfield as follows:

a. Personality factors

Personality factors include feelings of fear of one's abilities, lack of self-confidence, and trauma from bad past experiences.

b. Social environmental factors

Social environmental factors include parents forcing their children to be good at mathematics, teachers in the classroom who seem scary, and

teaching methods from teachers who are less attractive.

c. Intellectual factor

Intellectual factors or psychological factors include the level of students' thinking abilities and students' talents (Anita, 2014).

Another thing that causes mathematics anxiety is a lack of confidence in students in learning mathematics (Stuart, 2000). Therefore,mathematics anxiety has a big influence on the ongoing learning process for students.

Meanwhile, the consequences of mathematics anxiety in students are as follows:

a. From a cognitive perspective

Includes students having difficulty concentrating in learning and not being able to think calmly while studying.

b. From an affective perspective

Includes students feeling afraid of facing exams and not believing in them

own abilities.

c. From a motoric perspective

Including that students' faces will look pale when asked to answer math questions and they will often sweat when working on the questions given by the teacher (Nurmila, 2016).

There are several indicators in measuring students' levels of mathematics anxiety. Components of mathematics anxiety indicators include attitudinal, cognitive, and physical (Richardson & Suinn, 1972)1) attitudinal, namely indicators of mathematics anxiety that appear in students in the form of or related to students' attitudes. 2) cognitive, namely indicators of mathematics anxiety that appear in students in the form of or related to changes in students' cognitive abilities (such as suddenly forgetting lesson material and having difficulty thinking clearly). 3) physical, namely indicators of mathematics anxiety that appear in students in the form of or related to changes in the student's body condition (for example, frequent cold sweats or tension, which is indicated by a fast heartbeat).

Mathematics anxiety that occurs in students has several levels. There are those with low, medium, and high math anxiety. The level of mathematics anxiety that occurs in each student is different. It all depends on how many factors cause math anxiety to occur.

Each student's level of mathematics anxiety is different. However, mathematics lessons may generally be a frightening prospect for students. Mathematics is seen as a science that is difficult to master. That kind of mindset starts negative thoughts which eventually grow into reality in students. Several things cause mathematics lessons to be greatly feared by students, namely 1) Mathematics is a specific branch of science. Studying mathematics involves many cognitive abilities. Mathematics requires a strong memory, and perseverance in working on problems and applying them in everyday life. 2) Mathematics is considered by many people to be a very difficult subject. So that kind of perception influences the mindset of students who will study mathematics. 3) Mathematics is a monotonous subject. Practitioners do not provide innovation in learning models so practitioners seem to put pressure on students during the mathematics learning process. In this way, students' abilities cannot be explored because students tend to often close themselves off and are afraid of mathematics lessons and their teachers.

After knowing students' levels of mathematics anxiety and the factors that make mathematics lessons feared, teachers or practitioners must provide solutions to the problems their students experience. The solutions provided aim to reduce or even eliminate feelings of anxiety during the mathematics learning process. The solution offered by Freedman in overcoming mathematics anxiety is 1) eliminate negative (pessimistic) self-talk; 2) ask questions during the mathematics learning process; 3) consider that mathematics is a foreign language that must always be practiced; 4) when studying mathematics, don't rely on memorization; 5) often read mathematics books; 6) have your learning method; 7) if you experience difficulties, immediately ask a friend or practitioner for help to explain; 8) during the mathematics learning process, try to remain relaxed and comfortable; 9) say that mathematics is “easy” and everyone can master it; 10) always develop responsibility if the results still fail or even if they are successful(Butun, 2021).

Problem solving skill

Dewi et al. explain that problem solving ability is the ability to apply the knowledge or knowledge that a person already has to situations that are still new and unknown(Fernández et al., 2021). Then a more specific opinion regarding solving mathematical problems is that mathematics can be used as a tool in solving everyday problems (Brewster & Miller, 2020).Based on this opinion, problem-solving ability is important, both in life in the school environment and in everyday life. This is supported by the opinion which says that ability

important for students, because it not only helps in understanding mathematics lessons but also helps in solving problems in everyday life(Sevgi & Çaliskan, 2020).

The basis of problem solving is that students are required to think first. This agrees with Deway who explains the concept of thinking as the basis for solving problems(Samosir & Dasari, 2022). These concepts include 1) students feel difficult about a problem; 2) the problem is limited and clarified; 3) search for and classify information or data; 4) find out what the relationship between the data is in order to create a hypothesis, then the hypothesis is tested to see whether its truth value is accepted or rejected; 5) apply the concept of problem solving so that finally a conclusion is obtained from the problem. So the ability or ability of students in Solving a problem faced by using different strategies and steps for each individual in relation to solving problems in mathematics is called mathematical problem solving ability.

The importance of problem solving abilities for students cannot be separated from the learning components which require thinking abilities, problem solving abilities, and the ability to create something new. The criteria for someone being able to master problem-solving skills were conveyed by Samo, namely if someone is able to fully absorb information on a problem, then with the information that has been obtained it will inspire a plan for what will be done to solve the problem, of course with the correct procedural steps so that the results finally a conclusion was obtained from the problem faced(Putri & Miatun, 2023). Problem solving abilities include high level abilities. Therefore, these abilities must always be trained by students. This agrees with Marlissa & Widjajanti who say that students who have problem solving abilities means they will always be trained to think at a high level, because students are required to be able to understand the material (concept), relate it to previous concepts and then apply it in the real world in everyday life(Widana, 2021).

Solving a problem is a basic activity that every individual must have. This life is not free from problems. Therefore, every individual must be able to have the skills to complete it. Problem solving according to other opinions includes success in creating something for someone(Samosir & Dasari, 2022). This means that someone provides solutions to the problems faced. Problem solving ability has several aspects. Among these aspects are the aspect of understanding, the aspect of using mathematical methods (strategies) and steps, and communication. The understanding aspect includes the ability to classify the information and data needed to solve a problem and from this problem a mathematical model is then created. Then the strategy aspect includes the ability to choose a strategy and then apply it using the correct mathematical procedures. Lastly, the communication aspect includes the ability to explain strategies, concepts and procedures carried out in problem solving activities.

An obstacle for students in the aspect of problem solving ability is that students often experience obstacles in understanding problems so that they are less precise in choosing and using solving strategies. To be appropriate and effective in problem solving activities, an indicator or steps in problem solving are prepared. According to Santrock steps that must be taken so that the problem solving process is effective are: 1) students must first organize the problems found, students who are able to express information about a given problem means they are said to be able to understand the problem well; 2) students develop strategies in solving problems; 3) students provide an evaluation of the solutions provided; 4) towards problems and solutions, students always identify them again .

Then the indicator that students are said to be able to solve problems can be seen from the strategies created to solve problems (Rosneli et al., 2020). Polya explained the stages in problem solving, namely: 1) understanding the problem, meaning that students are able to grasp the problem, find out what they know and what is asked in the question; 2) planning solutions, namely students are expected to be able to create effective strategies for problems that have been encountered previously; 3) solving problems, namely students use strategies that have been prepared previously to solve problems, of course the procedural steps in using the strategies that have been prepared must be correct; 4) checking again, meaning that after the previous steps have been carried out, students get a solution to the problem. It is not enough to stop there, students also have to check whether the solution they have given is correct or not. Accuracy at this stage is very important for students (Polya, 2000).

According to Wankat and Orevocz, the operational strategy steps in problem solving are: 1) I can, meaning that at this stage there is

motivation to develop students' self-confidence; 2) definition, meaning students are asked to write down what they know and what is asked; 3) Discovery, namely encouraging students to enthusiastically ask questions; 4) plan, namely providing guidance to students to create effective strategies in solving a problem; 5) implementation, namely guiding students to use the strategies prepared in the previous step to start solving problems; 6) correct (Check it), meaning inviting students to check.

The Effect of Mathematics Anxiety on Mathematical Problem-Solving Ability

According to Richardson and Suinn, the definition of mathematics anxiety is a feeling of anxiety and depression that influences a person in manipulating mathematical problems both in school academic life and in everyday life (Khatoon, T. & Mahmood, 2010). This math anxiety is negative because it can damage students' concentration. Then in another opinion, according to Blazer, mathematics anxiety is a negative emotion associated with solving mathematical problems(Prodromou & Frederiksen, 2018). Students' problem-solving abilities are influenced by mathematics anxiety, meaning that when solving problems or problems, students are anxious, nervous and rushed so that the final score results are less than satisfactory. Another opinion is that mathematics anxiety affects not only when students are working on questions, but also at the beginning of learning, students already feel anxious, nervous and afraid of mathematics lessons.

The negative correlation between mathematics anxiety and mathematical problem solving abilities means high levels of anxiety and low levels of problem solving abilities, conversely, low levels of mathematics anxiety and high levels of problem solving abilities(Herman et al., 2023). According to Ashcraft and Faust, this means that mathematics anxiety is a feeling of compulsion, anxiety, even worry, mixed with unusual errors in numbers and solving mathematical problems (Guo & Liao, 2022). From the description above, it can be concluded that anxiety has a negative relationship and influence on the ability to solve mathematical problems.

In the research article above, information was obtained that mathematics anxiety can affect several students' cognitive abilities, including mathematics anxiety affecting the ability to understand concepts, critical thinking, creative thinking, procastination, adaptive reasoning, and the students' own learning outcomes. From the research data obtained, mathematics anxiety has a negative effect on the abilities mentioned above. If students are in the highest position in mathematics anxiety, then these students have low cognitive abilities. In fact, the influence of mathematics anxiety on learning outcomes has been widely studied by previous researchers. The results include, among other things, that mathematics anxiety has an effect on learning outcomes of 54.8; 66.8; to 75.4. All percentages show that math anxiety has an effect of more than 50, which means the resulting impact is very large. Then it is said that students must be able to control their mathematics anxiety because it has a very negative impact on students' learning outcomes. Students with high position anxiety indicate that the learning outcomes obtained are low. Conversely, students with low position anxiety will obtain higher learning outcomes than students with high anxiety.

Based on the research data collected, mathematics anxiety has an influence of 24.56; 31.9; 42.9; 45.6 to 86.3 towards problem solving skills. This shows that mathematics anxiety has a big influence on students' problem-solving abilities. Then the influence produced by mathematics anxiety is a negative influence. This means that if students' math anxiety increases, their problem-solving abilities will become lower. Vice versa, from journal articles relating to the influence of mathematics anxiety on problem-solving abilities, they all come to the conclusion that if the level of mathematics anxiety is high then problem-solving abilities will be low. So the relationship between the two is a reverse value relationship. Therefore, it is necessary to control mathematics anxiety. This is necessary so that students in studying and facing mathematics problems can feel calmer and more focused, so that the resulting concentration will be maximized.

Judging from the perspective, general problem-solving abilities can be described as follows. In the first stage of problem solving, namely the stage of understanding the problem, students with low levels of mathematics anxiety are able to interpret problems or questions well and perfectly. They are able to write down everything they know in the problem and what is being asked. Then, students with moderate levels of mathematics anxiety are also able to interpret questions, even though they are not perfect. There are some things that are known that were not written down. Students with a high level of

mathematical anxiety in interpreting questions tend to be imperfect. They are also unable to write down what they know and ask about the questions. The second stage of problem-solving skills is preparing a resolution plan. Students with low levels of mathematics anxiety are able to plan solutions well. The procedural steps that will be carried out have also led to the correct results. Students with moderate levels of mathematics anxiety also tend to be able to plan solutions well. Then, students with a high level of mathematics anxiety are still ambiguous in preparing a solution plan. The plans made tend not to lead directly to solving the problem.

The third stage of problem-solving ability is implementing the resolution plan that was prepared in the previous stage. Students with a low level of mathematics anxiety will be able to carry out plans that have been prepared in the previous stage with the correct procedural steps. They work on the questions calmly and without any accompanying fear. So the results obtained from this question will most likely be correct.

Students with moderate levels of anxiety tend to experience difficulties even though they are finally able to do the questions. However, there tend to be some procedural steps that are overlooked or are not done carefully enough in their work. Then, students with high levels of anxiety are unable to carry out a resolution plan, because at the previous stage they were unable to develop a resolution plan. As a result, at the next stage there was also difficulty in working on these questions. The fourth stage of problem-solving ability is the re-checking stage. For students with low levels of mathematics anxiety, they are able to carry out the re-examination activity stage carefully and well. Students with moderate levels of anxiety tend to be inconsistent in re-checking the answers they get. They are not careful in re-checking or even do not re-check the answers they get. Then students with high levels of anxiety do not carry out the re-checking stage. They were bored because at the previous stage they had difficulty working on and getting answers to the questions.

Students with high levels of mathematics anxiety tend to avoid mathematics problems or appear unmotivated when facing mathematics problems. In the classroom, students with high anxiety usually tend to be anxious and afraid which can be seen on their faces. The reason the student is anxious and afraid is that he feels he cannot or does not understand the material presented by the practitioner. The peak is if a practitioner gives a question or problem on the board and appoints one of the students to come forward to work on it, then students with high levels of anxiety will experience the peak of their anxiety.

Then students with a high level of mathematics anxiety will do everything they can to complete the tasks given by the practitioner. This is done to avoid angering practitioners. It's also possible to copy a friend's work. Another sign that is felt is that the hours of mathematics lessons seem to last very long compared to other lessons. This happens because students are not able to enjoy mathematics lessons and hope to finish the lesson as soon as possible. In fact, students' inability to enjoy lessons will actually make the lesson time seem longer than other lessons.

From the description above, the researcher draws the outline that problem solving abilities are greatly influenced by students' mathematics anxiety. Then, one of the causes of mathematics anxiety appears is that students are less able to understand the concepts of the material being presented. So as a teacher or practitioner, the first thing to improve is to instill in students not to be afraid of mathematics lessons, because mathematics lessons are not as difficult as they imagine. After that, practitioners must also build students' abilities to understand the material. Model the learning and wisdom of a practitioner can help the process. A practitioner's friendly, smiling and always patient attitude in teaching are the criteria that students expect.

4. Conclusions

Anxiety about mathematics can have a negative impact on students' cognitive abilities. Not only problem-solving abilities but other abilities such as conceptual understanding, critical thinking, creative thinking and adaptive reasoning are also influenced by a student's level of mathematics anxiety. From the research that has been studied, it can be concluded that if a student's level of mathematics anxiety is high, their problem-solving abilities will be low and vice versa. Students with a low level of mathematics anxiety will have high problem-solving abilities. Problem solving skills are greatly influenced by students' mathematics anxiety. Next, one of the causes of student anxiety in mathematics is that students do not understand the concepts in the material presented. Therefore, as an instructor or teacher, the first thing that must be improved is to instill in students not to be afraid of mathematics

class because mathematics class is not as difficult as they imagine. Teachers also need to develop students' abilities to understand lessons. Teacher learning and mental models can facilitate this process. A teacher's friendly, smiling and patient attitude in teaching are the criteria that students expect.

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