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An Analysis of Personality Styles; Does mathematics anxiety change with adversity Quotient?

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abstract

This research aims to categorize the mathematics anxiety and adversity quotient in students and describe the profile of mathematics anxiety in students based on the adversity quotient. This research method is qualitative with a case study design. The subjects of this study were 45 students of SMPIT Sabilul Huda. The data collection instruments used were the Taylor Manifest Anxiety Scale (TMAS), the Adversity Quotient Response Profile (ARP) scale, and interview guidelines. Data analysis techniques used are data reduction, data presentation, and conclusion. From this study, it was found that (1) the level of mathematics anxiety at SMPIT Sabilul Huda was in the category of severe anxiety, (2) the level of AQ at SMPIT Sabilul Huda was in the category of campers, (3) the profile of mathematics anxiety based on AQ was divided into 9 categories, namely the category of severe anxiety and climbers (B-Cl), severe anxiety and campers (B-Cm), severe anxiety and quitters (BQ), moderate anxiety and climbers (S-Cl), moderate anxiety and campers (S-Cm), moderate anxiety and quitters (SQ), mild anxiety and climbers (R-Cl), mild anxiety and campers (R-Cm), mild anxiety and quitters (RQ).

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Keywords:

Math Anxiety; Adversity Quotient; Intelligence



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INTRODUCTION

Mathematics is one of the subjects that is considered important in the world of education from elementary school to college (English & Halford, 2012). This is based on the fact that mathematics has a role in various aspects of life. Mathematics is closely related to everyday life, so students can apply the results of learning mathematics in daily life, even in work later (Lave, 1988; Boaler, 2000). Students must systematically develop thinking skills through mathematics lessons and teach them to think critically and logically to solve problems (Yayuk, 2020). It is needed in a person's mindset to solve life's problems (Surya & Putri, 2017). In mathematics, there are various topics, from the easiest to the most difficult. But mathematics is often considered difficult and scary for most students (Chinn, 2020). Students' understanding and interest in mathematics also eventually decrease and affect the mathematics learning outcomes obtained by these students. What causes difficulties in mathematics lessons is related to two factors: internal and external factors, such as factors from the child himself, environmental factors, society, and school (Wijaya, et al., 2015). In addition, school learning activities are also a factor that needs consideration to find a solution. Inappropriate and efficient teacher learning can increase students' difficulties in mathematics (Acharya, 2017).

Low student understanding could raise concerns in students, which can happen because less conducive classroom conditions cause it. This unfavorable condition can cause anxiety in students when learning or interacting with mathematics lessons, commonly known as mathematics anxiety (Buckley, et al., 2016). Mathematics anxiety is a feeling of tension and anxiety that interferes with the process of manipulating numbers and the process of solving mathematical problems in ordinary and academic life and can eliminate one's self-confidence (Namkung, et al., 2019). Anxiety can be categorized into three psychological parts: fear, anxiety, tension, and others. Anxiety physiological such as heart palpitations, sweating, and high blood pressure, and social such as how the behavior is shown to the environment (Stoehr, 2017; Dacey et al., 2016).

Mathematics anxiety is inversely related to positive attitudes toward mathematics and is directly related to avoidance by students (Hembree, 1990). in line with research by Ray Hembree (1990), which states the same thing. This causes students' mathematical performance to decline because there is a negative relationship between math anxiety and math performance (Namkung, et al., 2019). In research conducted Luo et al. (2009) in China regarding the investigation and analysis of mathematics anxiety at the junior high school level, mathematics anxiety has become a focus in mathematics education as a passive mathematics learning experience. Through investigating the relationship between math anxiety, math performance, math interest, self-efficiency, gender differences, and class differences, it was found that math performance was significantly negatively correlated with math anxiety. Mathematics interest and independence were also negatively correlated with math anxiety, and ninth graders showed the highest anxiety levels during the middle school stage. Meanwhile, research on mathematics anxiety among junior high school students showed that the respondents showed a moderate level of mathematics anxiety (Delgado & Kassim, 2019).

Mathematics anxiety is important because this anxiety can interfere with the learning process and affect students' mathematics learning outcomes. of course, this will negatively impact students if they cannot manage their anxiety. In the research conducted Soni & Kumari (2017) mathematics anxiety negatively influences achievement/study outcomes. So a student must be able to manage this anxiety and change it in a more positive direction. Students who can handle their anxiety must face the challenges and difficulties that exist and must be ready to compete with their abilities (Haryandi, 2018). A student

must believe in his abilities to make him able to face the difficulties that will be faced. In psychology, this ability is referred to as AQ or Adversity Quotient. AQ is needed in a student to survive in any condition, even in tough conditions.

Stoltz (2000) defines AQ in three forms. First, AQ is a new conceptual framework used to understand and improve all conditions of success. Second, AQ is a measure of how we respond to adversity. Finally, AQ is a science-based set of tools to improve your response to adversity, which will result in improving your overall effectiveness. It can be concluded that AQ is a new and conceptual measurement used to determine the response to adversity to increase all forms of success. AQ reduces anxiety by improving our response to adversity and our ability to overcome and endure adversity (Masten, et al., 1990). This is done by understanding, measuring, and increasing AQ because students will need greater creativity, courage, determination, perseverance, and tenacity if difficulty grows. Stoltz (2000) also states that someone who responds to adversity as an opportunity will remain strong. Someone who becomes a victim of adversity and responds helplessly to it will become weak. Rahmelia (2016) says that AQ has a negative relationship with academic anxiety, so the higher the AQ, the lower the anxiety. The lower the AQ, the higher the anxiety felt. From this study, it can be seen that AQ can overcome the difficulties faced so that the anxiety felt will be reduced. This study also explains that students have an AQ in the medium category, which means that students cannot yet face difficulties optimally.

Research in China regarding the mathematics AQ of junior high school students is lagging. These students have a low average AQ, indicating they have difficulty learning mathematics when facing setbacks or problems (Qin, Zhou, & Tanu, 2019). Meanwhile, in India, Miss Mary's research on the relationship between high school students' AQ and self-concept shows a significant positive relationship between the following variables and says that AQ intelligence is a predictor of global success (Devakumar, 2012). Wahyuningtyas' (2019), mathematics anxiety, and AQ are associated with creative thinking skills. Similar to previous research, Wahyuningtyas et al. (2020) mathematics anxiety and AQ are associated with creative thinking abilities. Meanwhile, Wirayadnya (2018) mathematics anxiety and AQ are associated with mathematics learning outcomes, in which both variables have a relationship with mathematics learning outcomes. From the explanation of several studies that have been described, there are differences in the research conducted. This study's mathematical anxiety and AQ were not associated with other variables. Referring to the dilemma of this phenomenon, the study aims to analyze mathematics anxiety based on students' personality types. In addition, this study also seeks to review the relationship between the adversity quotient and the level of students' math anxiety.

METHODS

Research Design

This study was carried out at SMPIT Sabilul Huda, Cirebon district, Indonesia. The research was carried out at the school because most students experienced math anxiety. Research subjects were determined using purposive sampling techniques. A total of 45 Grade VIII students were used as research subjects. The average grade VIII junior high school students are 12-14 years old. This age is in the range of adolescence.

Design research is a case study research using a qualitative approach. Research with a qualitative approach does not emphasize hypothesis testing but an effort to answer research questions through formal and argumentative thinking. Case study research is an in-depth study of something that will describe it well and completely (Azwar, 2017). A

qualitative approach to the case study design in this study was used to explore the profile of students' mathematics anxiety based on AQ. Mathematics anxiety is divided into 3 categories: severe, moderate, and mild. Meanwhile, AQ is categorized into three types: climbers, campers, and quitters. This research was conducted through 4 stages of research. The four stages are preparation, giving a math anxiety scale, giving an Adversity Quotient scale, and interviewing. The details are shown in the following figure 1.

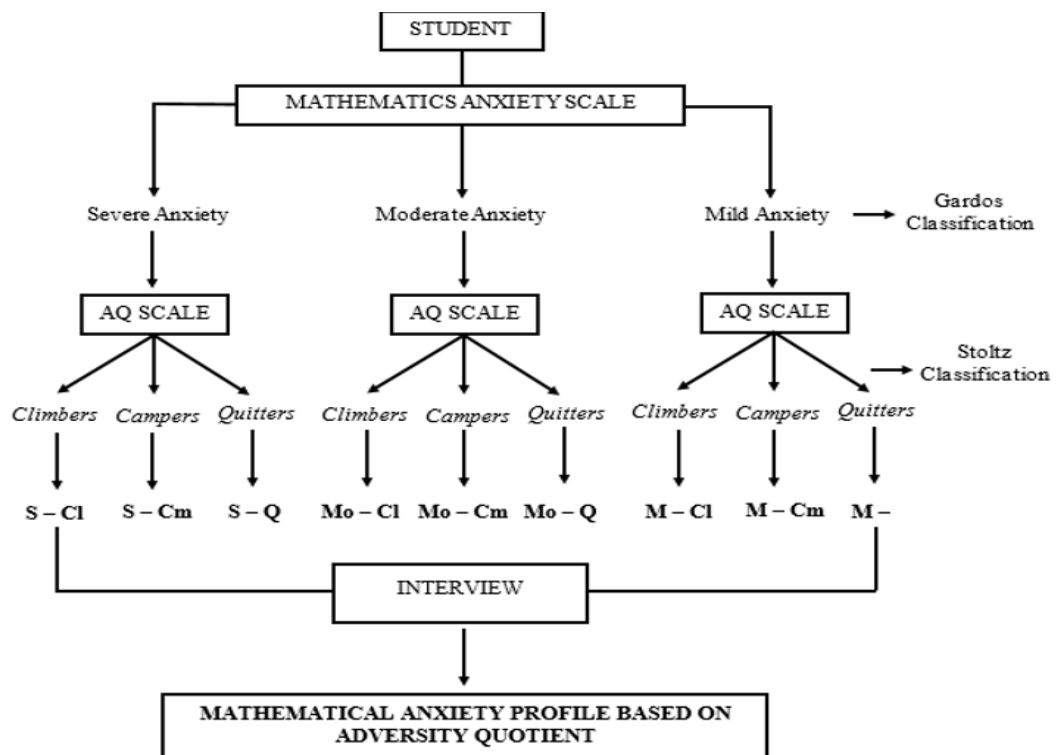


Figure 1.
Research Procedure

ased on the Figure 1 of the research flow above, it can be seen the stages carried out in this research and how to get research subjects. The stages are divided into 4, while the stages are as follows:

1. Preparation Stage

The first stage is the preparation stage. At this stage, the researcher prepares the things needed in the research. As well as finding the subject of this study, namely junior high school students and making mathematical anxiety scale instruments, Adversity Quotient, and interview guidelines.

2. Stage of Giving Math Anxiety Scale

The second stage is giving math anxiety scale. At this stage, 45 students were given a mathematical anxiety scale instrument to be categorized into 3 levels of mathematics anxiety. The levels are heavy, medium, and light.

3. The Stage of Giving the Adversity Quotient Scale

The third stage is the giving of the Adversity Quotient scale. At this stage, 45 students were given an Adversity Quotient scale instrument to re-categorize into 3 levels of Adversity Quotient. The levels are climbers, campers, and quitters. After knowing the categories of students based on the level of mathematics anxiety and Adversity Quotient, proceed to the next stage.

4. Interview

The fourth or final stage in this research is the interview. The interviewed students were not entirely, but only took 9 students to be the main subject of this research. The nine students were included in one of the categories, namely, severe anxiety in the category of AQ climbers, campers, or quitters, moderate anxiety in the category of AQ climbers, campers, or quitters, and mild anxiety in the category of AQ climbers, campers, or quitters. After the 9 students were interviewed, the profile of students' mathematics anxiety was obtained based on the Adversity Quotient.

Data Collection and Analysis

The research instruments used were Taylor Manifest Anxiety Scale (TMAS) and Adversity Quotient Response Profile (ARP). The instrument was validated using content validity with five experts. The scale's content validity was determined in consultation with experts who were knowledgeable about the topic and scope of the research. All of their suggestions for scale improvement are included in the final copy. Furthermore, the values obtained from 5 experts were processed and tested with the Aiken formula. The research instrument is considered valid because the value of V is higher than 0.05. The data analysis technique used in this study is the Miles & Huberman model. The data analysis process of the Miles & Huberman model is divided into three: data reduction, data presentation, and conclusion (Alwan, 2020). TMAS in this study was compiled based on the combined dimensions of math anxiety according to Sue (Priyanto, 2017), Nevid (Hadi et al., 2020), and Haralson (Sugiatno, et al., 2017). The dimensions of math anxiety are divided into 4, namely cognitive, affective, physical (motor and somatic), and behavior. Adversity Quotient Response Profile or response profile to difficulties is a scale to measure students' AQ. This scale is based on four dimensions Stoltz (2000) proposed: control, origin, ownership, reach, and endurance.

Table 1
ARP Grid

Operational Definition	Dimension	Aspect
Adversity Quotients is measured through control, origin and ownership, reach, and endurance.	Control	How much control do students feel about events that cause difficulties in learning mathematics?
	Origin	Derived from what or who the difficulties in learning mathematics caused.
	Ownership	The extent to which students recognize the impact of difficulties in learning mathematics.
	Reach	How far the difficulties in learning mathematics reach other parts of students' lives.
	Endurance	How long the difficulties in learning mathematics and the causes of the difficulties persist.

Table 2
TMAS Grid

Operational Definition	Dimension	Aspect
Students' mathematical anxiety can be measured through cognitive, affective, physical (motor and somatic) reactions, and behavior.	Cognitive	Students understand mathematical material. Students forget the math material they have learned. Students concentrate when the mathematics learning process takes place. Students cannot do math problems correctly. Students get unsatisfactory mathematics learning outcomes
	Affective	Students are not confident in their abilities. Students dare to answer questions from the teacher. Students dare to give arguments about learning mathematics. Students dare to ask the teacher if they do not understand the material. Students feel afraid and tense when learning mathematics.
	Physical (motor dan somatic)	Students experience body shaking in learning mathematics. Students have difficulty in speaking when learning mathematics. Students feel tired when learning mathematics. Students experience symptoms of shortness of breath and weakness when learning mathematics. Students sweat profusely when learning mathematics. Students experience heart palpitations unlike usual when learning mathematics.
	Behaviour	Students are not comfortable in class when learning mathematics Students shy away from learning mathematics

This study conducted interviews to determine the factors that influence math anxiety and Adversity Quotient. Factors that influence math anxiety are compiled based on the opinions of Trujillo and Hadfield intellectuals (Qausarina, 2016), Freud, Calvin, and Mowrer (Hadi, et al., 2020). The factors that influence math anxiety are internal and external factors. Internal factors include personality or psychological and intellectual or cognitive students themselves. While external factors come from the student's environment, which includes the family, school, and community environment. The factors that influence the Adversity Quotient based on the opinion of Stoltz (2000) are competitiveness, performance, creativity, motivation, taking risks, improvement, persistence, and learning.

RESULT

Levels of Mathematics Anxiety

This study categorizes mathematics anxiety into three levels. The levels are severe anxiety, moderate anxiety, and mild anxiety. Researchers used an anxiety measuring instrument called the anxiety scale or TMAS. This scale was given to 45 students from SMPIT Sabilul Huda because the learning carried out at SMPIT Sabilul Huda was based online, so the scale was given via google form. From the results of this study, it was found that the category of students' mathematical anxiety at SMPIT Sabilul Huda was still diverse. There were 21 subjects with severe anxiety levels, 16 with moderate anxiety, and

8 with mild anxiety. As for more details, the categories of mathematics anxiety can be seen in the following table 3.

Table 3
Levels of Mathematics Anxiety

Categories	n (%)	Subject
Severe	n=21 (46,7%)	S1, S3, S7, S9, S10,S12,S13,S14, S22, S25, S27, S28, S30, S32, S36, S37, S40, S41, S42, S43, S44
Moderate	n=16 (35,5%)	S2, S6, S16, S17, S18, S19, S20, S24, S26, S29, S31, S33, S35, S38, S39, S45
Mild	n=8 (17,8%)	S4, S5, S8, S11, S15, S21, S23, S34

Based on table 3, information was obtained that 45 students of SMPIT Sabilul Huda had severe math anxiety levels. There are 21 students, or 46.7%, who have a severe level of anxiety, 16 students, or 35.5% who have a moderate level of anxiety, and 8 students, or 17.8%, who have a mild level of anxiety based on the results of the math anxiety scale that has been given.

Levels of Adversity Quotient

This research categorizes Adversity Quotient into three levels. These levels are climbers, campers, and quitters (Stoltz, 2000). The researcher uses an Adversity Quotient scale measuring instrument commonly called the Adversity Quotient Response Profile (ARP). This scale was given to 45 students from SMPIT Sabilul Huda. Because the learning at SMPIT Sabilul Huda is online-based, the scale is given through the google form. From the results of this study, it was found that the Adversity Quotient category of students at SMPIT Sabilul Huda was still considered diverse. The Adversity Quotient category can be seen in the following table.

Tabel 4
Levels of Adversity Quotient

Categories	n (%)	Subject Code
Climbers	n=13 (28,9%)	S4, S6, S8, S15,S20, S23, S27, S28, S34, S35, S36, S40, S44
Campers	n=27 (60%)	S2,S3, S9, S10, S11, S12, S13, S14, S16, S17, S18, S21, S22, S24, S25, S26, S29, S30, S31, S32, S33, S37, S38, S39, S41, S43, S45
Quitters	n=5 (11,1%)	S1, S5, S7, S15, S42

Based on table 4, information is obtained that 45 students of SMPIT Sabilul Huda have an adveristy quotient at the campers level. There are 13 students or 28.9% who have the category of climbers, 27 students or 60% who have the category of campers, and 5 students or 11.1% who have the category of quitters. This study's results are similar to the research conducted Huda & Mulyana (2018) that the AQ category obtained is the campers category.

Mathematical Anxiety Profile Based on Adversity Quotient

Based on table 3 and table 4, which have been described previously, the results of categories for each subject were obtained. From 45 subjects, 9 students were selected who had severe anxiety in the AQ climbers, campers, or quitters category, moderate anxiety in the AQ climbers, campers, or quitters category, and mild anxiety in the AQ climbers, campers, or quitters category. For more details, it can be seen in the following table 6.

Tabel 5
Profile of Mathematical Anxiety Based on Adversity Quotient

Subject	Math Anxiety Categories	Adversity Quotient Categories	Type
S36	Severe	Climbers	S-Cl
S30	Severe	Campers	S-Cm
S42	Severe	Quitters	S-Q
S20	Moderate	Climbers	Mo-Cl
S2	Moderate	Campers	Mo-Cm
S19	Moderate	Quitters	MO-Q
S8	Mild	Climbers	M-Cl
S11	Mild	Campers	M-Cm
S5	Mild	Quitters	M-Q

Based on Table 6, information is obtained that 9 subjects match the desired criteria. The nine subjects were S36, S30, S42, S20, S2, S19, S8, S11 and S5. The subjects were interviewed about the factors that influence math anxiety and Adversity Quotient. Two factors influence math anxiety, namely internal and external factors. Internal factors include personality or psychological and intellectual or cognitive students themselves. In comparison, external factors come from the student's environment, including the family, school, and community. The factors influencing the Adversity Quotient are competitiveness, performance, motivation, risk-taking, improvement, persistence, and learning.

DISCUSSION

Categories of Severe Anxiety and Climbers (S-Cl)

Based on the results of interviews with S36, it was found that the factors that caused S36 to experience severe anxiety consisted of personality, subject's intellectuality and family environment. S36 didn't like math because he felt it made him dizzy and difficult to understand. Low understanding can raise concerns in students (Anditya, 2016). y and difficult to understand. Low understanding can raise concerns in students (Anditya, 2016). Subjects feel that they have little ability in mathematics, so they can work on math problems if their parents help them. S36 was still unsure about the results of his own answer. His mother scolded S36 if he got a low score in math because his mother was good at math. When one family wants students to get good grades in mathematics, while students do not master the subject, it can cause anxiety in students (Anditya, 2016). This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016).

Besides having a category of severe anxiety, S36 also has a category of climbers. Based on the results of interviews with S36, information was obtained that the factors that affect S36's AQ consist of 8 factors. (1) The subject's competitiveness factor is indicated by the attitude of never thinking about giving up in learning mathematics. So it doesn't make the S36 helpless. (2) In the performance factor, this is shown by S36 asking his mother and continuing to try to solve the difficulties in learning mathematics. (3) On the creativity factor. S36 shows creativity in answering math problems, such as looking for other ways if you don't find answers to math problems. (4) In the motivation factor S36 is motivated by the family. S36 can also motivate himself by watching productive videos on YouTube. (5) On the risk-taking factor, S36 is brave in taking risks to keep participating in learning mathematics. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the repair factor, S36 wants to correct the mistakes that have been

made. Like an error in answering a math problem. S36 improves by studying harder so that mistakes don't happen again. (7) On the persistence factor, S36 feels that he is not a diligent student. (8) On the learning factor, S36 has a good optimistic spirit, thus making him learn a lot. Giving gifts did not affect the desire to learn the subject. So that S36 continues to study even though he is not rewarded in the form of gifts. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning.

Of the 8 factors that affect AQ, S36 only has 7 factors and does not have 1 factor, namely the persistence factor. Based on research conducted by Bancin (2015), only 3.07% or a small percentage of subjects chose persistence as an influential factor to achieve goals or increase AQ. Therefore, the persistence factor S36 does not possess does not have much effect on S36 reaching the climbers category.

Categories of Severe Anxiety and Campers (S-Cm)

Based on the results of interviews with S30, it was found that the factors that caused S30 to experience severe anxiety consisted of personality, subject intellectuals and the school environment. S30 sometimes likes math when it's easy, but dominantly doesn't like math. According to him, mathematics is a subject that is difficult to understand and makes him dizzy. S30 feels that he is not very competent in mathematics. According to him, S30 doesn't have that ability because math is difficult, so sometimes he can answer and sometimes he can't. Students who have a mindset or view that mathematics is difficult can foster math anxiety in these students (Anditya, 2016). S30 is sometimes not confident with the answers to the math problems that have been done. S30 felt that the school environment or the classroom's condition when learning mathematics was not conducive. In line with Anditya's (2016) research that a class that is not conducive can reduce students' concentration in learning. Lack of concentration can make students' understanding low and cause math anxiety in students. These factors are in accordance with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016).

In addition to having a severe anxiety category, S30 also has a campers category. Based on the results of interviews with S30, information was obtained that the factors that affect the AQ of S30 consist of 8 factors. (1) On the competitiveness factor, S30 has low competitiveness because they think pessimistically to give up in learning mathematics. S30 often answers math problems from scratch, because he gave up on finding answers. (2) On the performance factor, this is shown by S30 studying harder so as to improve his performance in solving difficulties. (3) On the creativity factor, S30 shows creativity in answering math problems such as looking for other ways if you don't find answers to math problems. (4) In terms of motivation, S30 is motivated by family and friends. S30 can also motivate himself by remembering that it is his duty. (5) On the risk-taking factor, S30 is brave in taking risks to keep participating in mathematics learning. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the repair factor, the S30 wants to correct the mistakes that have been made. S30 improves by studying harder so that mistakes don't happen again. (7) On the persistence factor, S30 feels that he is not a diligent student. (8) On the learning factor, S30 is more enthusiastic in learning if given a gift. This shows that the S30 still expects a reward, not a will from within. If not rewarded, the S30 sometimes learns and sometimes it doesn't. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning.

Of the 8 factors that affect AQ, S30 only has 5 factors and does not have 3 factors, namely competitiveness, perseverance, and learning factors. Based on research conducted by Bancin (2015), the competitiveness factor has an influence of 16.92%, the persistence

factor is 3.07%, and the learning factor is 1.53% in increasing AQ. Because the S30 does not have these factors, it affects the AQ S30 category.

Categories of Severe Anxiety and Quitters (S-Q)

Based on the results of interviews with S42, it was found that the factors that caused S42 to experience severe anxiety consisted of personality, subject intellectuals and the school environment. S42 does not like mathematics because he cannot understand the material and answer questions. S42 has no ability in mathematics. Low understanding can raise concerns in students (Anditya, 2016). S42 is still often hesitant or not confident with the results of his own answers. S42 had a bad experience when he was remedial in learning mathematics. According to him, the reason for S42 being remedial was because he did not understand the material even though the teacher had explained it. The explanation of the material explained by the teacher was felt to be incomprehensible. The low ability of teachers in delivering learning materials makes it difficult for students to understand, so it can cause math anxiety (Whyte & Antony, 2012). Therefore, S42's anxiety is influenced by the school environment, more precisely the teacher's explanation. This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016).

In addition to having a category of severe anxiety, S42 also has a category of quitters. Based on the results of interviews with S42, information was obtained that the factors that affect S42's AQ consist of 8 factors. (1) On the competitiveness factor, S42 has low competitiveness because he thinks pessimistically to give up in learning mathematics. (2) In terms of performance, S42 does not significantly improve its performance when faced with difficulties in learning mathematics. (3) On the creativity factor, S42 shows a lack of creativity in himself in answering math problems. S42 looks for another way if he doesn't find the answer to a math problem: asking a friend. However, if you still can't answer the question then don't continue. (4) On the motivation factor, S42 was given motivation by his mother, sister, and friends. S42 can also motivate himself by doing things he likes, such as drawing and writing. (5) On the risk-taking factor, S42 is brave in taking risks to keep participating in mathematics learning. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the repair factor, S42 wants to correct the mistakes that have been made. S42 improves by studying harder so that mistakes don't happen again. (7) On the persistence factor, S42 feels that he is not a diligent student because his grades are dropping. (8) On the learning factor, S42 is more enthusiastic in learning if given a gift. This shows that S42 still expects a reward, not a will from within. If you are not given a prize, S42 will only study when you want to take an exam. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning.

Of the 8 factors that affect AQ, S42 only has 3 factors and does not have 5 factors, namely competitiveness, creativity, performance/productivity, perseverance, and learning. Based on research conducted by Bancin (2015), the competitiveness factor has an influence of 16.92%, the creativity factor is 1.53%, the performance factor is 4.61%, the persistence factor is 3.07%, and the learning factor is 1.53% in increasing AQ. Because S42 does not have these five factors, it affects the AQ S42 category.

Category of Moderate Anxiety and Climbers (Mo-CI)

Based on the results of interviews with S20, it was found that the factors that caused S20 to experience moderate anxiety consisted of personality, subject's intellectuality and the environment. S20 likes and feels competent in mathematics. S20 is also confident and rarely doubts his answers when working on math problems. The S20 has had a bad experience when it came to low scores. At that time, S20 was yelled at by the math teacher

if he couldn't answer. According to S20, mathematics teachers teach in a hurry and unclearly. The low ability of teachers in delivering learning materials makes it difficult for students to understand, so it can cause math anxiety (Whyte & Antony, 2012). This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016). S20 only experienced external factors because the teacher's explanation was difficult to understand and had been scolded by the teacher if he did not understand the material.

In addition to having a moderate anxiety category, S20 also has a climbers category. Based on the results of interviews with S20, information was obtained that the factors that affect S20's AQ consist of 8 factors. (1) On the competitiveness factor, S20 has good competitiveness, it can be seen based on the optimistic spirit in the subject. Even though S20 had a bad experience in learning mathematics, S20 never thought about giving up because he felt it was an obligation. According to him, adversity is a challenge and makes the spirit. (2) In the performance factor, this is shown by S20 asking the teacher to solve the difficulty. (3) On the creativity factor, S20 shows creativity in answering math problems such as looking for other ways if you don't find answers to math problems. (4) In S20 motivation factors are motivated by parents and teachers. S20 can also motivate yourself by remembering your main goal. (5) On the risk-taking factor, S20 is brave in taking risks to keep participating in mathematics learning. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the repair factor, S20 wants to correct the mistakes that have been made. (7) On the persistence factor, S20 feels that he is a diligent student. (8) In the learning factor, S20 has a good optimistic spirit, so that he learns a lot. Giving gifts did not affect the desire to learn the subject. So that S20 continues to study even though they are not rewarded in the form of gifts. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning. S20 owns all the factors that affect AQ in him, so it can be ascertained that the cause of S20 has the category of climbers.

Category of Moderate Anxiety and Campers (Mo-Cm)

Based on the results of interviews with S2, it was found that the factors that caused S2 to experience moderate anxiety consisted of personality, subject's intellectuality and the environment. S2 likes and feels competent in mathematics. The factor that causes master's degree to like mathematics is the group learning method. So that S2 can understand the material well because a group of friends teaches it. Masters likes math because they can understand the material well. S2 had a bad experience when getting a score below the KKM. According to master's degree, mathematics teachers in schools sometimes teach material sometimes with difficulty. The low ability of teachers in delivering learning materials makes it difficult for students to understand, so it can cause math anxiety (Whyte & Antony, 2012). This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016). Master's degree only experienced external factors, namely having had a bad experience in learning mathematics.

In addition to having a moderate anxiety category, S2 also has a campers category. Based on the results of interviews with S2, information was obtained that the factors that affect AQ S2 consist of 8 factors. (1) On the competitiveness factor, Master's Degree has good competitiveness, it can be seen based on the optimistic spirit in the subject. Masters never thought of giving up when experiencing difficulties in learning mathematics. (2) On the performance factor, Masters always improves their performance when faced with difficulties in learning mathematics. This difficulty does not make S2 a pessimist. When experiencing difficulties, S2 informs parents and tries to solve the difficulties. (3) On the creativity factor, Master's Degree shows creativity in answering math problems such as

looking for other ways if you don't find answers to math problems. (4) On the motivational factor, master's degree is motivated by a group of friends at school. Masters can also motivate yourself by remembering the desired goal: getting good grades. (5) On the risk-taking factor, Master's degree is brave in taking risks to keep participating in learning mathematics. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the improvement factor, S2 wants to correct the mistakes that have been made. S2 improves by studying harder so that mistakes don't happen again. (7) On the persistence factor, S2 feels that sometimes he is diligent and sometimes he is not. (8) On the learning factor, Master's degree has a good optimistic spirit, thus making him learn a lot. Giving gifts did not affect the desire to learn the subject. So that S2 continues to study even though they are not rewarded in the form of gifts because they feel that learning is an obligation. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning.

Of the 8 factors that affect AQ, S2 has 7 factors and only the persistence factor which is sometimes owned and sometimes not. Based on research conducted by Bancin (2015), only 3.07% or a small percentage of subjects chose persistence as an influential factor to achieve goals or increase AQ. Although these factors only have a slight effect, their absence still influences the AQ S2 category.

Category of Moderate Anxiety and Quitters (MO-Q)

Based on the results of interviews with S19, it was found that the factors that caused S19 to experience moderate anxiety consisted of personality, the subject's intellectuality and the environment. S19 sometimes likes math and sometimes doesn't. S19 did not like math because it was difficult for him to understand. Low understanding can raise concerns in students (Anditya, 2016). S19 felt that he did not have much ability in mathematics. S19 sometimes still has doubts about the answers to math problems that have been done. S19 had a bad experience in learning mathematics when he got a small score and was punished. This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016). S19 experienced internal and external factors.

In addition to having a moderate anxiety category, S19 also has a quitters category. Based on the results of interviews with S19, information was obtained that the factors that affect S19's AQ consist of 8 factors. (1) On the competitiveness factor, S19 has low competitiveness because they think pessimistically to give up in learning mathematics. (2) On the performance factor, S19 had experienced difficulties in learning mathematics, namely not understanding and forgetting formulas. Even so, the S19 still improves its performance by re-memorizing the formula. (3) On the creativity factor, S19 did not look for other ways if he did not find the answer to the math problem and chose not to continue. (4) On the motivation factor, S19 is motivated by parents. S19 can also motivate himself by doing things he likes, such as listening to music. (5) On the risk-taking factor, S19 is not too brave in taking risks to continue learning mathematics. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the improvement factor, S19 wants to correct the mistakes that have been made. S19 improves by learning so that mistakes do not repeat themselves. (7) On the persistence factor, S19 felt that he was not diligent and only studied if there was a test. (8) On the learning factor, giving gifts does not increase the enthusiasm for learning S19. Because S19 rarely studies and wants to learn if there is only a test. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning.

Of the 8 factors that affect AQ, S19 only has 3 factors and does not have 5 factors, namely competitiveness, creativity, motivation, perseverance, and learning. Based on research

conducted by Bancin (2015), the competitiveness factor has an influence of 16.92%, the creativity factor is 1.53%, the motivation factor is 47.69%, the persistence factor is 3.07%, and the learning factor is 1.53% in increasing AQ. Because S19 does not have these five factors, it affects the AQ S19 category.

Categories of Mild Anxiety and Climbers (M-CI)

Based on the results of interviews with S8, it was found that the factors that caused S8 to experience mild anxiety consisted of personality, subject's intellectuality and the environment. S8 has the ability in mathematics. S8 doubts the answer in answering math problems if it has not been checked again. However, S8 always checks the answers for math problems that have been done. S8 does not feel anxious when studying mathematics. That's because S8 always prepares for learning well. The S8 has never had a bad experience. According to S8, the mathematics teacher taught the material well and clearly. This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016). The S8 suffers neither internal nor external factors.

In addition to having a mild anxiety category, the S8 also has a climbers category. Based on the results of interviews with S8, information was obtained that the factors that affect S8's AQ consist of 8 factors. (1) In terms of competitiveness, S8 has good competitiveness, it can be seen based on the optimistic spirit in the subject. The S8 never thought about giving up because it felt like an obligation. (2) In the performance factor, this is shown by S8 asking the teacher to solve the difficulty. (3) On the creativity factor, S8 shows creativity in answering math problems such as looking for other ways found in books if you don't find answers to math problems. (4) In S8 motivation factors are motivated by parents and teachers. S8 can also motivate yourself by remembering the target you want to achieve. (5) On the risk-taking factor, S8 is brave in taking risks to keep participating in mathematics learning. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the repair factor, the S8 wants to fix the mistakes that have been made. The error was not being thorough in answering questions, S8 corrected it by studying harder. (7) On the persistence factor, S8 feels that he is a diligent student. (8) On the learning factor, S8 has a good optimistic spirit, thus making him learn a lot. Giving gifts did not affect the desire to learn the subject. Because given a gift or not, S8 still learns. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning. S8 owns all factors that affect AQ in him, so it can be ascertained that the cause of S8 has the category of climbers.

Categories of Mild Anxiety and Campers (Mo-Cm)

Based on the results of interviews with S11, information was obtained that the factors that caused S11 to experience mild anxiety consisted of personality, subject's intellectuality and the environment. S11 has the ability in mathematics. S11 is sometimes unsure of the answer in answering math problems. S11 does not feel anxious when studying mathematics. The S11 has never had a bad experience. According to S11, the mathematics teacher taught the material well and clearly. This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016). S11 does not experience internal or external factors.

In addition to having a mild anxiety category, S11 also has a campers category. Based on the results of interviews with S11, information was obtained that the factors that affect S11's AQ consist of 8 factors. (1) On the competitiveness factor, S11 has good competitiveness, it can be seen based on the optimistic spirit in the subject. S11 never thought of giving up when experiencing difficulties in learning mathematics. (2) On the

performance factor, S11 always improves its performance when faced with difficulties in learning mathematics. This difficulty does not make S11 a pessimist. S11 reads a book in order to solve these difficulties. (3) On the creativity factor, S11 shows creativity in answering math problems. S11 looks for other ways found in books if they don't find answers to math problems. (4) In terms of motivation, S11 does not have someone who often motivates him. However, S11 can motivate yourself by looking at motivational words found on google or books. (5) On the risk-taking factor, S11 is brave in taking risks to keep participating in mathematics learning. The subject did this in an effort to overcome difficulties in learning mathematics. (6) In the repair factor, S11 wants to correct the mistakes that have been made. S11 improves by learning so that mistakes do not repeat themselves. (7) On the persistence factor, S11 feels that he has not been diligent. (8) On the learning factor, S11 has a good optimistic spirit, thus making him learn a lot. Giving gifts did not affect the desire to learn the subject. This is in line with the opinion of Stoltz (2000) that the factors that influence AQ are competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning..

Of the 8 factors that affect AQ, S11 has 7 factors, and only the persistence factor is not owned. Based on research conducted by Bancin (2015), only 3.07% or a small percentage of subjects chose persistence as an influential factor in achieving goals or increase AQ. Although these factors only have a slight effect, their absence still influences the AQ S11 category.

Categories of Mild Anxiety and Quitters (MO-Q)

Based on the results of interviews with S5, it was found that the factors that caused S5 to experience mild anxiety consisted of personality, subject's intellectuality and the environment. S5 likes math because there are counting activities. S5 also feels they have the ability in mathematics and feels happy if S5 has had a bad experience when remedial because the study was not concentrated. Lack of student concentration in learning can make it difficult for students to understand the material, low student understanding can cause math anxiety in students (Anditya, 2016). The subject's parents advised and scolded a little when they found out that the mathematics test was remedial. However, according to S5 the teacher teaches mathematics material clearly. This is in line with Trujillo and Hadfield who state that the factors that influence math anxiety are personality, intellectual and environmental or social factors (Qausarina, 2016). S5 experienced external factors, namely bad experiences when scolded by the family environment when remedial.

In addition to having a mild anxiety category, S5 also has a quitters category. Based on the results of interviews with S5, information was obtained that the factors that affect S5's AQ consist of 8 factors. (1) On the competitiveness factor, S5 has low competitiveness because they think pessimistically to give up in learning mathematics when doing assignments. S5 also thinks that all difficulties always make him dizzy. (2) On the performance factor, S5 has experienced difficulties in learning mathematics, namely when working on questions. Even so, the S5 still improves its performance by asking friends. (3) On the creativity factor, S5 did not look for other ways if he did not find the answer to the math problem and chose to answer the original. (4) On the motivational factor, S5 does not have someone who often motivates him. The S5 can't even motivate itself. (5) On the risk-taking factor, S5 is brave in taking risks to keep participating in learning mathematics. (6) In the repair factor, S5 wants to fix the mistakes that have been made. (7) On the persistence factor, S5 feels he is not diligent and only learns if there is a test. (8) On the learning factor, S5 is more enthusiastic in learning if given a gift. This shows that S5 still expects a reward, not a will from within. If not rewarded, S5 learns less often. This is in line with the opinion of Stoltz(2000) that the factors that influence AQ are

competitiveness, performance, creativity, motivation, taking risks, persistence, improvement, and learning.

The 8 factors that affect AQ, S5 only has 3 factors and does not have 5 factors, namely competitiveness, creativity, motivation, perseverance, learning. Based on research conducted by Bancin (2015), the competitiveness factor has an influence of 16.92%, the creativity factor is 1.53%, the motivation factor is 47.69%, the persistence factor is 3.07%, and the learning factor is 1,53% in increasing AQ. Because S5 does not have these five factors, it affects the AQ S5 category

CONCLUSION

The profile of math anxiety based on the adversity quotient is divided into 9 categories. First, severe anxiety and climbers (S-CI) experienced all the factors that affect math anxiety and almost all of the factors that affect AQ except persistence factor. Second, severe anxiety and campers (S-Cm) experienced all the factors that affect math anxiety and had factors that affected AQ except for competitiveness, persistence, and learning. Third, severe anxiety and quitters (S-Q) experience all the factors that affect math anxiety and only have 3 factors that affect AQ: motivation, improvement, and taking risks. Fourth, moderate anxiety and climbers (Mo-CI) experienced external factors in mathematics anxiety and had all the factors affecting AQ. Fifth, moderate anxiety and campers (Mo-Cm) experienced external factors in mathematics anxiety and almost all of the factors affecting AQ except persistence. Sixth, moderate anxiety and quitters (MO-Q) experience all the factors that affect math anxiety and only have 3 factors that affect AQ: performance, motivation, and improvement. Seventh, mild anxiety and climbers (M-CI) did not experience all the factors that affect math anxiety and had all the factors that affected AQ. Eighth, mild anxiety and campers (M-Cm) did not experience all the factors that affect math anxiety and almost all of the factors that affect AQ except persistence factor. Ninth, mild anxiety and quitters (M-Q) only experience external factors in mathematics anxiety and have 3 factors that affect AQ: performance, risk-taking, and improvement.

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