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Students phobias of mathematics teachers at fourth grade elementary schools

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Abstract: This research was conducted with the background of existing issues faced by students when the mathematics teacher was teaching. The objective of this study is to obtain data related to the causes of mathematics teacher phobia among 4th-grade students in elementary schools. This research method used descriptive qualitative with a case study design and data collection techniques in the form of interviews, observations, and questionnaires conducted on students in 4th-grade elementary schools. The results of the study show that the punishment given by the teacher can make students phobia of the teacher because each student has different conditions. The phobia of students towards math teachers may arise due to the implementation of progressive discipline by the teacher towards each student. Many teachers consider a progressive discipline attitude as one of the most effective ways of educating students to be more disciplined, but this attitude makes a student phobia towards him because his psychology is different from other students. As a result, phobia can be shown directly from students, for example, students are afraid when dealing with math teachers so they will stay away from them as much as possible.

Keywords: phobias, students, math teachers.

PRELIMINARY

Currently, many students have a fear of mathematics as they perceive it to be the most difficult subject (F. Okafor & S. Anaduaka, 2013). The reason for students viewing mathematics as the most challenging subject lies in the educational system that tends to generalize the abilities of students (Purnomo, 2017). A learning system that is too disciplined can trigger a sense of phobia in students. This is because every child has different conditions, as well as differences in the growth and development of each student which include social, physical, and mental.

Mathematics is a very important science because it has a major influence on human life. A learning environment that supports them in developing their knowledge is one way to make learning more meaningful (Onal & Buyuk, 2021). A teacher must possess multitasking abilities, being both an educator and a learner while also playing

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the role of a friend to each student (Muhammad, 2019). In addition, a teacher is required to be able to choose various learning strategies that make students easy to interact with others (Muh., 2016). With the abilities possessed, it is hoped that the teacher will not feel burdened so that he can discipline students without violence.

Corporal punishment, commonly referred to as the administration of physical discipline to students as a means of instilling discipline, is not regarded as violence but rather as a method of learning (Windari & Belakang, 2015). In Indonesia, some teachers resort to punishments towards students, both verbal and non-verbal. The violence that occurs within schools is understood by some teachers as a means to discipline their students. However, in reality, such disciplinary actions can lead to students developing a phobia towards their teachers.

Phobia is an irrational fear of specific situations or objects. One of the causes of students developing a phobia towards their teachers is the use of a stick or cane during teaching (Arthur et al., 2015). The use of a stick, whether in verbal or non-verbal form, can trigger irrational fear and disrupt creativity for those experiencing it.

The research was conducted at 4th-grade Tenggulunan Elementary School which explained students' phobias of elementary school mathematics teachers. This study aimed to obtain data related to the causes of student phobias in mathematics teachers in elementary schools. In previous studies, (Mulhamah, 2018) using phobia variables in learning mathematics and (Sulistyani & Retnawati, 2015) using the mathematics phobia variable has an impact on junior high school students' mathematics learning achievement, while in this study using a new variable, that is the students' phobia of elementary school mathematics teachers.

METHOD

This research is qualitative research with a case study research instrument. The population in this study were all members of class 4 C at Tenggulunan Elementary School using a random sampling technique so that 28 respondents in one class were obtained. The data validation technique used triangulation. The research data were subsequently analyzed, and the findings were obtained to be used for the discussion. This study employed the Guttman scale for each item of the questionnaire, adhering to the Guttman scale usage as presented in Table 1.

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Table 1. Guttman Scale Instrument Characteristics of Student Pobias

Alternative Answers	Weight
Agree	Score 1
Don't agree	Score 0

Data collection techniques in this study used the results of interviews, observations, and questionnaires. Data collection in the form of interviews in this study consisted of 6 questions posed to class teachers, 5 questions posed to close friends of students who had phobias of teachers, and 9 questions posed to students who experienced phobias. The interview method employed in this research is a structured interview, wherein all the processes adhere to the guidelines prepared by the researcher. The interviews were conducted with the purpose of gathering comprehensive information related to students' phobia towards elementary school teachers. This study presents conversations that allow both students and teachers to express their opinions freely regarding the interview topics presented by the researcher.

Data collection in the form of a questionnaire in this study consisted of 15 questions for the characteristics of the phobias that exist in students, to filling them out required the help of teachers who play a role in understanding the habits of students during learning. The questionnaire used by researchers is an open questionnaire, where this questionnaire is used to obtain subjective opinions regarding the questions given by researchers.

RESULTS

The results of questionnaires and interviews conducted by researchers on students are appropriate with the characteristics of the phobias that occur in students toward mathematics teachers at grade 4 elementary schools, which can be seen in the diagram below:

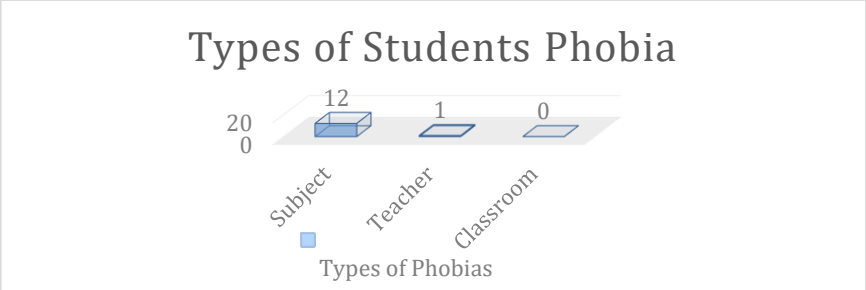

Diagram 1. Types of Student Pobias

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Diagram 1 illustrates the types of phobias that occur among students, with a total of 28 respondents. This includes 12 students who have a phobia of mathematics, also known as numerophobia, 1 student having a phobia of mathematics teachers, and 0 students having a phobia of their classroom. The remaining 15 students show a strong liking for both their teachers and the subject of mathematics.

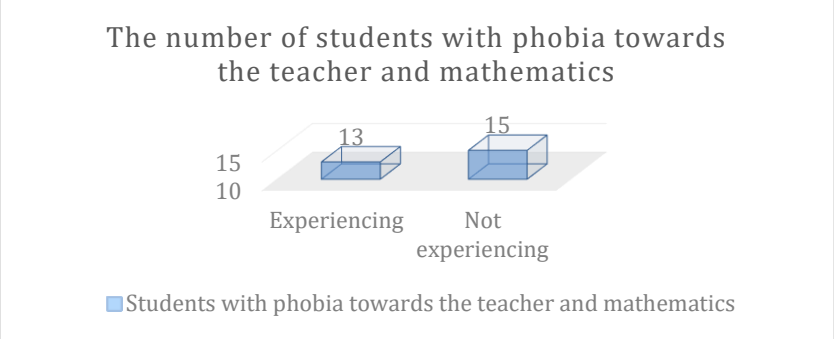

Diagram 2. Number of Pobia Students in Teachers and Mathematics Lessons

Diagram 2 shows the number of students who experience phobias in teachers and mathematics lessons, Out of the 28 students who became respondents, 13 students experienced phobia, while 15 students did not experience any phobia.

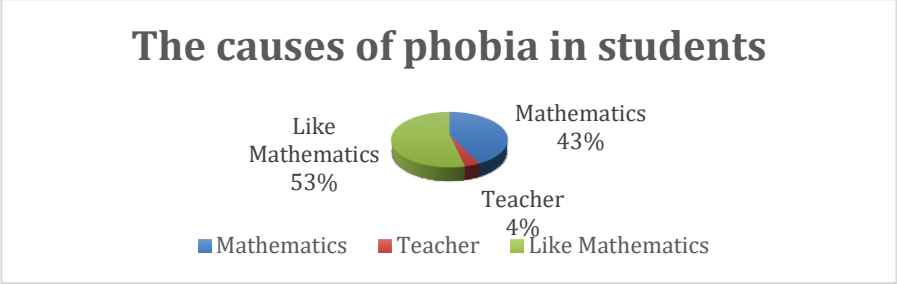

Diagram 3. Causes of phobias in students

Diagram 3 displays the percentage of the causes of mathematics phobia among elementary school students. It shows that 43% of the phobia among students is attributed to the perception that mathematics is very difficult. As a result, they tend to avoid situations involving calculations or numbers as much as possible. There are 4% of the causes of mathematics phobia among students are attributed to mathematics teachers, as they assume that mathematics teachers are harsh leading them to avoid the teachers when encountered. There are 53% of students who think mathematics is easy

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and fun. Besides that, the teacher is also firm so that the knowledge that the teacher teaches is quickly transferred by students.

DISCUSSION

In the research method, it has been explained that this research used a qualitative approach with the case study method. Qualitative research is an approach to a study that follows traditional ways of conducting social, behavioral, and health science research (Creswell, 2018). Based on the research conducted at SDN Tenggulunan, the results indicate that there is a student in the 4th grade of elementary school who experiences phobia towards their mathematics teacher. The phobias that occur in these students are included in the category of specific phobias.

Specific phobias are extreme and persistent fears of certain objects, situations or activities, and people(Garcia, 2017). The cause of specific phobia lies in the emergence of past experiences that were highly negative with a particular person or specific situation, leading to traumatic events for the individual who suffers from it and carrying over into their future (Anantayudha & Putra, 2022). As happened to students, the causes of students' phobia of math teachers include 1) direct conditioning, when students have unpleasant situations from the teacher, both during learning and outside of class hours; 2) observational learning is a form of learning through observation, where if the teacher gives punishment to students it will be easy to imitate; 3) transmission of information is students hear a lot of assumptions from those around them who think math teachers are scary, causing them to fear math teachers. This can happen because the mathematics teacher applies a progressive disciplinary attitude to students, so that when students violate the rules that the teacher makes they will be punished both verbally and non-verbally. Unbeknownst to the teacher, such disciplinary attitudes can lead students to develop a phobia towards mathematics, extending even towards the teacher. If punishments in the form of verbal or non-verbal actions persist, it can significantly impact the psychological and emotional well-being of the students, both during learning and when engaging with the subject that triggers the phobia (Anita, 2014).

Disciplinary behavior that teachers apply in lessons, including mathematics such as scolding, punishing, and threatening students in front of their friends is a

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phenomenon of violence that often arises during learning. The phenomenon of violence is one of the triggering factors for students' phobias towards teachers, especially mathematics teachers. In teaching and learning, the existence of punishment is something that is usually done by a teacher to discipline students from bad behavior. The teacher thought that the students would be deterred by corporal punishment, but this made the students hate and disobey the teacher.

Mathematics is a discipline that can stand on its own and also serves as a valuable foundation for the development of other sciences, offering precise knowledge in line with technological advancements and relying more on rationalism than empiricism (Yin et al., 2020). Realizing the significance of mathematics in life, students are expected to approach the subject with dedication and diligence, aiming to achieve excellence in their mathematical studies, even attaining satisfactory results. Among students, there are still differences in views on mathematics, even on the mathematics teachers themselves, some of them view mathematics as well as mathematics teachers as good and some are not good. Students who view lessons as well as math teachers are not good will experience learning difficulties.

The differences in students' perspectives can be influenced by their previous learning experiences, especially during their early educational years. Unpleasant or negative experiences in learning mathematics and achieving low academic performance in the subject can significantly impact students' abilities to approach mathematics with confidence. Unpleasant learning experiences for students can start from teachers who are considered unfriendly, assignments are always piling up, math scores are never good, or mathematics itself is considered a subject that is difficult to understand, and even the mathematics teacher himself is considered a scary teacher. Previous experiences will change or remain determined by the conditions of the students, student motivation, and other factors outside the students themselves, found by researchers, that there is a student who still remembers until he went to the higher class about an unpleasant incident when he is not doing the assignment.

Students who perceive mathematics as the most difficult subject will form negative impressions and experiences related to mathematics, which generally have a detrimental impact on their motivation and interest in learning mathematics, as well as

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their academic adjustment in school (Siregar, 2017). When students have low motivation in mathematics, especially towards the mathematics teacher, it can lead to a decline in their academic achievements. As a result, the learning objectives set by the teacher may not be met, and the learning process may be considered unsuccessful or a failure. To enhance students' motivation and interest in learning, it is essential to have a teacher who can foster a positive attitude towards both the mathematics subject and the teacher. Mathematics, characterized by its association with abstract ideas represented by symbols and numbers, demands high cognitive engagement from students. Therefore, it is essential to create a pleasant learning environment where the process of learning mathematics can ignite the students' interest and motivation so that a positive attitude towards teachers and mathematics lessons can be realized in a pleasant condition that can arouse the interest of students so that a positive attitude towards mathematics and teachers can be realized (Ismail, 2021). (Ismail, 2021).

A teacher, before assigning a mathematics task, should ensure that students are equipped with the necessary skills. In addition, to foster students' positive attitudes towards mathematics, learning is needed that is friendly to reading, has meaningful and direct tasks related to students' lives, and is relevant to students' interests. Indeed, teachers should pose questions and provide opportunities for students to think outside the box, allowing them to explore unconventional ideas without being constrained by rules and traditions so that students understand the material better (Khoshaim, 2020). Collaboration is crucial for teachers, especially mathematics teachers, as it serves as a space for other educators to benefit from student-centered approaches to mathematics instruction.

Collaboration is a planned activity initiated by teachers, involving students together in the effort to work collectively and solve problems as a team (Maharani et al., 2020). In collaborative learning, interactions lead to shared goals, agreements, interactivity, and a high level of interdependence among students, so that the interactions that occur provide students with more detailed and valuable explanations that are useful for enhancing student learning. Indeed, in line with the 21st-century skills, there is a shift towards a new classroom culture with the active involvement of teachers, where students are at the center of the learning process and fully engaged in

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social and collaborative activities while learning and solving problems (Warner & Kaur, 2021). Teacher support in terms of students' feelings is supported through teacher assignments and feedback to students known as competency support, as well as teacher interaction with students who respect and care for each other commonly known as linkage support (Oppermann & Lazarides, 2021).

Based on the analysis of the research data, it can be seen that students who have a phobia of math teachers because they make mistakes due to their dislike of mathematics which is filled with calculations, the way mathematics teachers carry out progressive disciplinary attitudes so that their students are humiliated when they feel unappreciated and not considered, and the assumptions that students hear are strengthened when they see teachers giving punishment to other students. In addition, they are afraid of their math teacher because they are influenced by their classmates. If someone doesn't do their assignments or often doesn't understand the material, they will be penalized. Lastly, he already feels like a failure because his grades often drop and he doesn't understand the material the teacher explains, so he thinks negatively before even trying.

CONCLUSION

Based on the data above, it can be concluded that students' phobias of math teachers can occur because teachers apply progressive discipline to students when students make mistakes. Many teachers consider progressive discipline to be one of the most effective ways of educating students so that students are more disciplined when learning occurs. Unbeknownst to the teacher, such attitudes can be categorized as forms of violence that contribute to the development of phobia in students, leading them to perceive mathematics as the most difficult subject for many individuals. Furthermore, the teacher's approach in delivering the material may leave some students confused, resulting in their avoidance of completing assignments and subsequently facing punishments that leave a lasting impact on their memories. Hence, it is recommended that every teacher be aware of the conditions of each student before commencing a lesson, and adopt an educative or progressive disciplinary approach without resorting to violence when addressing students' mistakes.

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