THE EFFECT OF ASSERTIVE BEHAVIOR AND SELF-DISCLOSURE ON MATHEMATICAL PROBLEM-SOLVING ABILITY (SURVEY AT SMP NEGERI IN NORTH JAKARTA)

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Abstract
Objectives of the study: (1) Knowing the direct influence of assertive behavior on the ability to solve mathematical problems in public junior high school students in North Jakarta. (2) Knowing the direct effect of self-disclosure on the ability to solve mathematical problems in public junior high school students in North Jakarta. (3) Knowing the direct influence of assertive behavior on self-disclosure in public junior high school students in North Jakarta. (4) Knowing the indirect influence of assertive behavior through self-disclosure on the ability to solve mathematical problems in public junior high school students in North Jakarta. The method used in this study is the survey method. This study used a survey study. Test the hypothesis using path analysis. The results concluded: (1) There is a significant direct influence of assertive behavior on solving mathematics problems of public junior high school students in North Jakarta. This is evidenced by the acquisition of Sig. = 0.000 < 0.05 and (2) There is a significant direct influence of self-disclosure on solving mathematics problems of public junior high school students in North Jakarta. This is evidenced by the acquisition of Sig. = 0.038 < 0.05 and. (3) There is a significant direct influence of assertive behavior on the self-disclosure of public junior high school students in North Jakarta. This is evidenced by the acquisition of Sig. = 0.000 < 0.05 and. (4) There is a significant indirect influence of assertive behavior through self-disclosure on the mathematical problem-solving ability of public junior high school students in North Jakarta. This can be proven by the value, $t_{hitung} = 4,800, t_{hitung} = 2,112, t_{hitung} = 3,939, t_{hitung} = 0,415 < t_{table} = 1,980$.

Keywords: Math problem solving, assertive behavior, self-disclosure.

1. Introduction
Mathematics in school learning is a subject that is tested nationally. The development and application of mathematics as a basic science that must be learned is the demand of every teacher in the learning process activities, so that it has a very central role in shaping the mindset of students, therefore mathematics is an essential subject given in the educational curriculum. Learning mathematics is not enough to know concepts, but can use these concepts to solve problems, both problems related to mathematics and even problems encountered in everyday life. In line with this theory, Rusefendi (Andinny, 2013) suggests that mathematics is formed as a result of human thinking related to the fruits of thought, process, and reasoning. Therefore, problem solving becomes an important goal in the mathematics curriculum in schools.

Competency standards will be mastered if they are always equipped with a basic competency for solving problems related to these competency standards. Problem solving is important to learn because it can equip students in logical, analytical, creative, critical and systematic thinking. A good problem-solving process in learning and solving story
problems, students will gain experience using the knowledge and skills they already have to be applied in problem solving so that students are more analytic in decision making. So that problem-solving skills should be possessed by all students at every level of education.

The relationship between teachers and learners is not a dry relationship from an emotional aspect. However, sometimes the relationship is limited to "You learn and I teach", or if there is a personal relationship it is limited to a few specific students. As a result, students are less optimal in solving problems. It even causes negative feelings in teachers, such as: feelings of doubt, fear of asking the teacher, not daring to express the results of their thoughts for fear of being said wrong, and tend to close themselves both to friends and teachers. Students should have behavior towards teachers as facilitators to dare to convey requests, rejections, praise, expression and communication to teachers in the teaching and learning process.

Based on observations on grade VIII students of SMP Negeri Jakarta Utara, students are faced with various lessons, assignments, extra-curricular and organizational activities at school that encourage students to be active. However, most students still experience difficulties in mathematics lessons marked by semester grades in mathematics subjects are still low and do not reach KKM (Minimum Completeness Criteria) and also in the teaching and learning process between students and teachers, students are less able to use teachers as complete facilitators because students still tend to be apathetic when dealing with their teachers, so that students' wishes and expectations are not conveyed. Students also do not have the courage to convey ideas or ideas to their teachers. As stated by a mathematics teacher at one of the North Jakarta State Junior High School schools, "students in this school are active sir for school activities but in the process of learning in class students are still reluctant to tell problems to their teachers when experiencing difficulties either in lessons or when there are problems with their friends, for grade VII students, VIII and IX are more like that, but for extra-curricular activities it has gone quite well". The results of these observations illustrate that students have not dared to express their wishes directly to the teacher, in this case as a learning facilitator, so that students cannot convey ideas that can develop desires and expectations directly to their teachers. Therefore, in the process of solving problems it is very necessary to communicate effectively between teachers and students and also between fellow students.

2. Theoretical Background

Effective communication in problem solving is assertive behavior and self-disclosure. Assertive behavior is an attitude to communicate what is felt, wanted, and thought to others while maintaining and respecting the rights and feelings of others. Syukri &; Zulkarnain (2005: 57) suggest that assertivity behavior contains the characteristics of self-confidence, freedom of expression honestly, firmly, and openly without minimizing or ruling out the meaning of others and daring to be responsible. In assertive behavior, students are required to be honest with themselves and honest also when expressing feelings, opinions and needs proportionately without any intention to manipulate, utilize, deny the rights of others or doubt other parties.

Self-disclosure is revealing information about oneself. Devito (2011) suggests that self-disclosure is the disclosure of information about oneself that is usually hidden. Individuals who are capable of self-disclosure will be able to express themselves appropriately, more confidently and openly. If students are less able to open themselves, it will affect student problem solving because of fear, inferiority, and closed attitudes.
Therefore, assertive behavior and self-disclosure must be detected and changed in the family, school, and community environment and need to be developed so that students can show confidence in facing a problem and solving the problem.

Polya (Hamiyah and Jauhar, 2014: 120) suggests that problem solving as an effort to find solutions to a difficulty in order to achieve a goal that is not always immediately achievable. Problem solving is also a process of understanding problems to interpreting the resulting solution, each student has different problems in learning mathematics. This is because the thinking power and understanding process of students are not the same from one another. So that teachers play a role in helping solve these problems. When a student carries out the problem-solving process in the learning process, it is inseparable from the guidance of a teacher and interaction between fellow students that must be well established in order to achieve the goal of solving the problem.

Based on the description above, researchers have an interest in assertive behavior and self-disclosure so this study is entitled "The Effect of Assertive Behavior and Self-Disclosure on Mathematical Problem-Solving Ability". The formulation of the problem in this study is:

3. Is there a direct influence of assertive behavior on the ability to solve math problems in public junior high school students in North Jakarta?
4. Is there a direct influence of self-disclosure on the ability to solve math problems in public junior high school students in North Jakarta?
5. Is there a direct influence of assertive behavior on self-disclosure in public junior high school students in North Jakarta?
6. Is there an indirect influence of assertive behavior through self-disclosure on the ability to solve math problems in public junior high school students in North Jakarta?

3. Methods

This research was conducted in three public schools at the junior high school level of North Jakarta, namely SMPN 30, SMPN 136, and SMPN 289 North Jakarta with the object of research being grade VIII students for the 2019/2020 academic year with a population of more than 500 students. The method used in this study is a survey method with path analysis techniques. This research design uses path analysis techniques. In this study, three data were collected, namely:

1. The ability to solve mathematical problems, the technique of obtaining data was carried out by providing 13 points of questions describing relation and function material to grade VIII students in the 2019/2020 odd semester academic year, as research samples.
2. Assertive Behavior, a data collection technique using the Likert scale, which distributes 40 items of non-test instruments in the form of attitude scales to grade VIII students as research samples. Likert scale in research uses 5 categories, namely: always, often, sometimes, rarely, and never.
3. Self-disclosure, a data collection technique using the Likert scale, which is distributing 40 items of non-test instruments in the form of attitude scales to grade VIII students as research samples. Likert scale in research uses 5 categories, namely: always, often, sometimes, rarely, and never.
4. Results and Discussion

Description of Research Data

In the description of this research data will be presented various research results from the data obtained, which include: highest score, lowest score, mean (mean), median, mode, variety / variance and standard deviation / standard deviation.

<table>
<thead>
<tr>
<th>No</th>
<th>Descriptive size</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assertive Behavior</td>
<td>Self-disclosure</td>
</tr>
<tr>
<td>1</td>
<td>Mean</td>
<td>102.77</td>
</tr>
<tr>
<td>2</td>
<td>Median</td>
<td>103.00</td>
</tr>
<tr>
<td>3</td>
<td>Mood</td>
<td>105</td>
</tr>
<tr>
<td>4</td>
<td>Standard deviation</td>
<td>10.995</td>
</tr>
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Based on the calculation results of the path analysis above, the following information is obtained:

1. **Direct influence of assertive behavior on mathematical problem-solving ability**

   The research findings showed that assertive behavior measured showed a significant correlation and had a strong influence of more than 0.05 on the mathematical problem-solving ability of SMP Negeri in North Jakarta. Path coefficient $X_1$ towards $X_3$ ($p_{31}$) amounted to 0.593 and after being tested and calculated using SPSS 2.4 the effect was significant. This shows the direct influence of assertive behavior ($X_1$) to mathematical problem-solving ability ($X_3$). Direct contribution of assertive behavior ($X_1$) to mathematical problem-solving ability ($X_3$) as big as $(0.593)^2 \times 100\% = 35.17\%$, The remaining 64.83% was influenced by other factors.

   Based on the results of the calculation above, the results are in accordance and in line with the results of the hypothesis submission which states that there is an influence of assertive behavior on the ability to solve mathematical problems, this is because students in answering problems are more confident in opinions. Alberti and Emmons (Gunarsa, 2007) say people who have assertive behavior are those who judge that people can be oriented from within and they generally have strong self-confidence when facing problems.

   Students who have the ability to behave assertively are able to express themselves and are open to friends or others, able to convey their ideas to others. This opinion is in line with Adam and Lenz (1995) that students who behave assertively are able to meet their needs, because they dare to openly convey their needs to others, so that satisfying relationships are established. Students who behave assertively have an advantage in communicating well with friends and people around them.

   The results of the study proved the influence of assertive behavior on students' mathematical problem-solving abilities. The image of students who behave assertively is the image of students with a more cheerful attitude, dare to express opinions, so it will be easy for teachers to guide and teach lessons.

2. **The direct effect of self-disclosure on mathematical problem-solving ability**

   The research findings showed that self-disclosure in measure, showed a significant correlation and had a strong influence of more than 0.05 on the ability to solve mathematics problems in public junior high schools in North Jakarta. Path coefficient $X_2$
towards $X_3$ ($p_{32}$) of 0.261 and after being tested and calculated using SPSS 2.4 the effect was significant. This shows the direct influence of self-disclosure ($X_2$) to mathematical problem-solving ability ($X_3$). Direct contribution of self-disclosure ($X_2$) to mathematical problem-solving ability ($X_3$) as big as $(0.261)^2 \times 100% = 6.81\%$. The remaining 93.19\% is influenced by other factors.

Based on the results of the calculation above that the ability to solve mathematical problems can be influenced by student self-disclosure. Self-disclosure is necessary for students because it will result in successful learners in self-adjustment and academic success, what if students do not have self-disclosure skills, students will have difficulty in adjusting to the environment and always feel alone and inhibited communication which is needed in problem solving.

3. **Direct influence of assertive behavior on student self-disclosure**

The research findings showed that assertive behavior measured showed a significant correlation and had a strong influence of more than 0.05 on the self-disclosure of public junior high school students in North Jakarta. Path coefficient $X_1$ towards $X_2$ ($p_{21}$) amounted to 0.864 and after being tested and calculated using SPSS 2.4 the effect was significant. This shows the direct influence of assertive behavior ($X_1$) against self-disclosure ($X_2$). Direct contribution of assertive behavior ($X_1$) against self-disclosure ($X_2$). as big as $(0.864)^2 \times 100% = 74.65\%$. The remaining 25.35\% is influenced by other factors.

Based on the results of the calculation above that students' self-disclosure can be influenced by assertive behavior. Students with assertive behavior will tend to be better at self-disclosure than students who are less good at assertive behavior. This is because learners with good assertive behavior have emotional maturity such as: responding to criticism with a broad chest, being firm and daring to say no, supporting the opinions of others and being able to state their own opinions. So that in self-disclosure students will not feel burdened.

4. **The indirect influence of assertive behavior on problem-solving abilities through student self-disclosure.**

The results showed that there was an indirect influence of assertive behavior on the ability to solve problems through student self-disclosure. The magnitude of the influence is: $(p_{21} \times p_{32})^2 \times 100% = (0.864 \times 0.261)^2 \times 100% = 22.55\%$. The remaining 77.45\% was influenced by other factors.

Based on these findings, it shows that problem-solving skills can be influenced by students' assertive behavior, so this ability is very important for students to have in solving a problem. Increased problem-solving skills will be maximized if students are able to communicate well. Because with open communication and no shyness or fear of expressing opinions will make students more courageous and confident in solving problems and can foster a sense of confidence and want to continue solving problems thanks to the solid communication. Therefore, to create good communication, participants need skills in assertive behavior and skills in self-development. So that the problem solving that is done continuously increases.

5. **Conclusion**

Based on the results of hypothesis testing and data processing analysis in Chapter IV, the following conclusions are drawn:
1. There is a significant direct influence of assertive behavior on the mathematical problem-solving ability of public junior high school students in North Jakarta. This is evidenced by the acquisition of Sig. = 0.000 < 0.05 and $t_{hitung} = 4.800$.

2. There is a significant direct influence of self-disclosure on the mathematical problem-solving ability of public junior high school students in North Jakarta. This is evidenced by the acquisition of Sig. = 0.038 < 0.05 and $t_{hitung} = 2.112$.

3. There is a significant direct influence of assertive behavior on the self-disclosure of public junior high school students in North Jakarta. This is evidenced by the acquisition of Sig. = 0.000 < 0.05 and $t_{hitung} = 3.939$.

4. There is a significant indirect influence of assertive behavior through self-disclosure on the mathematical problem-solving ability of public junior high school students in North Jakarta. This can be proven by the value, $t_{hitung} = 0.415 < t_{table} = 1.980$.

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