The Influence of Student Teams Achievement Division Learning Method Toward the Accuracy of Partograph Documentation on Students in Diploma Study Program of Midwifery

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Abstract---Background: The essential aspect of the learning system is implementing the learning method; with the proper method, the teaching and learning process will be more precise, effective, and efficient. Whereas the dissociated and uncreative learning methods will contribute to the low comprehension material on students. Virtually, various methods can be implemented to escalate students' comprehension in the teaching and learning process; one of those methods is the STAD (Student Teams Achievement Division), which focuses on active learning patterns through Student-Centered Learning. This method teaches students about collaboration,
responsibility, interaction, trust, decision making, communication, and conflict management. Objectives: The focal point of this study is to determine the influence of the STAD (Student Teams Achievement Division) learning method on the accuracy of partograph documentation. Method: This study uses a Quasi-Experimental design with a Pretest-Posttest Design. The sample in this study consists of 30 students taken from the Quota Sampling technique. This study implements the Wilcoxon test to analyze the data. Results: The Student Teams Achievement Division learning method significantly influences the accuracy of partograph documentation with a p-value of 0.000 < 0.05. Conclusion: The implementation of the Student Teams Achievement Division learning method can improve student skills in partograph documentation.

**Keywords**—achievement division, learning method, partograph, student teams.

**Introduction**

The learning method is a strategy or technique used by educators to interact with students (1). A proper learning system should provide a good learning experience for students (2). Learning method focuses on increasing learning motivation, learning attitude, thinking critically, and achieving optimal learning outcomes (3). The most recent learning method is the lecture method, which uses PowerPoint where lecturers are more active during the learning process. Non-interactive and innovative learning methods are considered aspects of material incomprehension (4). In considering several methods used in learning programs, it highlights the STAD learning method as a compelling, interactive, and innovative method that educators can use to improve students learning comprehension (3).

STAD (Student Teams Achievement Division) is a learning method that focuses on active learning patterns through Student-Centered Learning this method promotes cooperation, responsibility, interaction, trust, decision making, communication, and conflict management in the teaching-learning process (5). This method also can assist teachers in implementing a cooperative approach (6). Further, the implementation of the STAD learning method provides discussion activity to actuate students' participation, improve individual achievement, critical thinking, diligence, and patience (7). It also increases students' commitment, provides less competitive (8), and trains students to be peer tutors for their friends (9). The "The Learning Pyramid" theory states that peer-tutor or teaching to others can be the most effective method to learn where the results in a retention rate are 80-100%. In contrast, the least effective way of learning is reading or listening methods, which only results in a 5-10% retention rate (10).

Based on the Indonesian Midwives competency in accordance to the Ministry of Health No. 369/MENKES/SK/III/2007, it states that two of the basic skills of midwives are to monitor the progress of childbirth using a partograph (11), and operate it as a decision-making tool (12). Silvia (2020) reveals the compliance of private practice midwives in operating partograph, and there are 63.6% of the
midwives who did not comply in filling out the front and back sheets of the partograph completely (3). Aligned with the result, Pujianti (2019) elaborates that it is due to the lack of knowledge, attitude, and motivation (14). Further, documentation becomes the legal basis for midwives in providing services (13). It is supported by Haile et al. (2020) that states out of 18 parameters, only 10 parameters were recorded entirely. It proves that the use of the partograph is relatively low, underrated, and has incomplete records (16). For example, in Ethiopia, the level of utilization of partograph is on a poor level (17). In a partograph record, midwives are mostly inconsiderate about the Maternal temperature (18). This incompetence of utilizing the partograph properly in childbirth may contribute to the difficulty in detecting problems and complications on the patient (19). Conversely, the appropriate use of the partograph can assist, manage, and detect the complication and its referral (20).

To be more capable of utilizing partograph material, the lecturer needs to implement appropriate learning methods so that students are not bored and motivated to learn (4). The appropriate and efficient learning methods can help midwifery students comprehend the steps for filling out the partograph, improve their application skills, and reduce the MMR and IMR (21).

**Method**

**Research location and design**

Conducted at the Health Polytechnic of the Ministry of Health Gorontalo, this research implements a Quasi-Experimental study with Pretest-Posttest Design without a control group.

**Population and sample**

The research takes all students (97 students) of the third semester at the Health Polytechnic of the Ministry of Health Gorontalo as the population. The samples in this research are 30 students selected using the Quota Sampling technique.

**Data collection and analysis method**

This study uses a pretest and a posttest approach. Before the intervention, a pretest is conducted for each respondent. Further, respondents are divided into five groups where each group consists of six students, and those groups have two times intervention of the STAD learning method. The respondents were divided by lecturer into five groups consisting of six people. After a discussion, the lecturer chooses one member of the group to present the results of the partograph documentation. The lesson lasts for two hours or 120 minutes. After giving the intervention, a posttest is conducted to see the accuracy of the partograph documentation on each respondent. The measuring instrument used in this research is the partograph. At the same time, the data analysis implemented the Wilcoxon test due to the categorized data and paired data groups aim to determine the influence of the STAD learning method toward the accuracy of partograph documentation.
Results

Characteristics of respondents

The characteristic of the respondents in this study is age. From the results of data collection through research instruments, it obtains:

Table 1
Description of respondents’ characteristics

<table>
<thead>
<tr>
<th>Age Characteristics</th>
<th>STAD Learning Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n(30)</td>
</tr>
<tr>
<td>18 years old</td>
<td>0</td>
</tr>
<tr>
<td>19 years old</td>
<td>26</td>
</tr>
<tr>
<td>20 years old</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 1 shows that most of the respondents are at the age of 19 years old or equal to 86.7%, and the rest 13.3% are respondents aged 20 years old.

Univariate analysis

Table 2
Measurement of Respondents’ Skills
Before and After Treatment

<table>
<thead>
<tr>
<th>Skill Measurement</th>
<th>STAD Learning Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n(30)</td>
</tr>
<tr>
<td>Pretest</td>
<td></td>
</tr>
<tr>
<td>incorrect</td>
<td>29</td>
</tr>
<tr>
<td>fairly correct</td>
<td>1</td>
</tr>
<tr>
<td>correct</td>
<td>0</td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
</tr>
<tr>
<td>incorrect</td>
<td>0</td>
</tr>
<tr>
<td>fairly correct</td>
<td>25</td>
</tr>
<tr>
<td>correct</td>
<td>5</td>
</tr>
</tbody>
</table>

*Frequency-Distribution

Table 2 shows that 29 respondents proceed with the incorrect partograph documentation in the pretest. However, 25 respondents have fairly correct partograph documentation in the posttest. The classification of the respondents is based on three categories, incorrect (score <75), fairly correct (score 75-99), and correct (score 100).
Bivariate analysis

Table 3
The Influence of STAD Learning Method on the accuracy of Partograph Documentation

<table>
<thead>
<tr>
<th>STAD method</th>
<th>n</th>
<th>Negative Rank</th>
<th>Positive Rank</th>
<th>Ties</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>30</td>
<td>0</td>
<td>29</td>
<td>1</td>
<td>0.000</td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Wilcoxon test*

Table 3 shows that 29 respondents improved their scores, and one respondent’s score remained the same (fixed score) compared to the pretest with a p-value 0.000 < 0.05.

Discussion

The majority of respondents (86.7% [n=26]) in this research are 19 years old. Age affects how somebody solves problems and makes decisions. Piaget supports the idea with the theory of cognitive development, where a person can reach the formal operational stage at the age of 15-20 years old. At those ages, students can understand concrete and abstract thinking concepts. Therefore, those theories strengthen and answer the surmise that people of 18-20 years old are quite mature in receiving various information. The STAD can also be defined as the SCL (Student Centered Learning) learning method where students are required to actively contribute during the learning program either personally or in groups. The purpose of having group division before and during the learning session is to optimize learning material distribution in the group. This study indicates that the STAD learning method effectively influences the accuracy of partograph documentation in maternity and newborn midwifery care subject with a p-value of 0.000 < 0.05. The statistical tests also show the probability of Z < 5% (0.007), which proved that implementing the STAD learning method can improve students' learning outcomes. This result is aligned with the explanation of Novita (2016) that the implementation of the STAD method provides better learning outcomes for students.

The cooperative learning of the STAD method allows group members to cooperate and help each other. In the group discussion process, the lecturer will become a facilitator to optimize students' critical thinking. Moreover, skills, collaboration, and design in group learning can increase student activity in cognitive, affective, and psychomotor. From the findings, there are several advantages gained from implementing the STAD learning method. First, it helps students to enhance their social skills besides cognitive skills. Further, it helps the lecturer be more focused as a facilitator, mediator, motivator, and evaluator. Lastly, it helps students comprehend two learning responsibilities; learning for themselves and assisting their friends to learn. Learning methods can be interpreted as achieving learning objectives. Implementing the learning process through practice can provide better learning outcomes for students than a monotone learning process in the classroom. It helps students experience the authentic atmosphere of being paramedics.
The findings and complex analysis show that 96.7% (n=29) of respondents experienced an increase after the treatment. It is occurred because of the provision of materials implemented STAD method during the learning process. Besides, group learning students in STAD method helps students to discuss, decide, and determine the steps in partograph documentation. This result aligns with Rismawati’s (2015) theory that the STAD learning method can enhance learners’ cooperation, trust, responsibility, interaction, decision making, and conflict management of learners. In addition, it can help students and lecturers exchange information (30).

Although there was a significant increase after the intervention, most of the respondents only experienced an increase in 1 category; the inappropriate category with <75 had changed into quite appropriate with a score 75-99. It is likely to happen because the lecturer’s group division did not meet students’ expectations. It may lead to the incommensurate collaboration of group members. In contrast to the advantage, STAD Learning Method requires the remarkable ability to carry out cooperative learning. It becomes challenging due to students’ characteristics, such as being cooperative (27). Referring to the findings, researchers assume that the Student Teams Achievement Division is compatible to be used in partograph learning programs of maternity and newborn midwifery care courses. However, it needs frequent meetings to improve student skills in utilizing and documenting through partographs.

Conclusion

The implementation of the Student Teams Achievement Division (STAD) learning method efficiently influencesthe accuracy of partograph documentation. There is a remarkable result on respondents’ scores before and after the STAD learning method was applied.

Acknowledgement

Researchers are deeply grateful for those who have assisted the research process from its writing, design, and composition, especially to the supervisors and examiners. Researchers also appreciate the midwifery students at the Health Polytechnic of the Ministry of Health of Gorontalo who are willing to involve and become respondents and related parties in this research.

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