Increasing Student’s Understanding on Adolescent Reproductive Health Through the Crossword Puzzle Media and Learning Videos Aided Counseling

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Abstract:
Adolescence is important for students because it transitions from childhood to adulthood. Knowledge about changes in adolescence, especially adolescents in Islamic boarding schools regarding adolescent reproductive health, is still low, so it needs to be improved. This service aims to increase the knowledge of service partners, especially students in Islamic boarding schools, regarding adolescent reproductive health. This devotion used the ABCD method, which consists of five stages: inculturation, discovery, design, definition, and reflection. This service program is carried out in July–August 2022. Service partners are students from classes X, XI, and XII. The service program is carried out with a learning model of team games tournaments (TGT) assisted by crossword puzzles and learning videos. Service data were obtained using pre- and post-tests regarding adolescent reproductive health. The data obtained are analyzed qualitatively and descriptively. The service results showed that counselling activities using crossword puzzle media and learning videos increased the knowledge of service partners by an average of 8.41.

Keywords: Adolescent reproductive health; Islamic boarding school; the crossword puzzles media; video learning
Introduction

Teenagers are residents between 10 and 18 years old (Permenkes RI, Number 25, 2014). According to another definition by the Population and Family Planning Board (BKKBN) in Pusdatin (2020), adolescents are unmarried residents between the ages of 10 and 24. In Indonesia, the number of adolescents between the ages of 10 and 24 is approximately 76188, while the number of adolescent boys is about 34576, and the number of adolescent girls is about 32612. (BPS, 2020). The number is substantial and has the potential for development and education, particularly in the field of reproductive health.

Reproductive health is being mentally, physically, and socially healthy about the tools, functions, and reproductive processes before and after marriage (Ministry of Health, RI, 2000). According to Rahayu (2017), reproductive health encompasses the absence of disease and impairment and physical, mental, and social well-being concerning the reproductive system. Based on this description, it can be concluded that reproductive health is not limited to the absence of disease or defects in the reproductive organs but encompasses every aspect of human beings as a whole, including their physical, mental, and sociocultural health, all of which are related to the reproductive system. Knowledge about reproductive health must be imparted at every age level of the human lifespan, especially during adolescence, when there is a transition between ages. Children mature into adults.

The importance of reproductive health for adolescents cannot be overstated. According to Ismoetia (2021), 20 to 25 percent of adolescents are susceptible to HIV/AIDS, and approximately 700,000 adolescents have abortions. Indonesia ranks second among ASEAN nations regarding young marriage after Cambodia (Pusdatin, 2020). Young marriage is at risk due to inadequate health, mental, emotional, educational, socioeconomic, and reproductive readiness. Based on these findings, it can be concluded that adolescents are a vulnerable age group regarding reproductive health due to their lack of knowledge in this area.
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Through education, adolescents' lack of knowledge regarding reproductive health can be improved. Counseling is a form of education that can be provided to adolescents. According to Jannah (2018), Kurniawaty (2021), and Simanjuntak, et al. (2022), counseling is effective in increasing adolescents' reproductive health knowledge.

Education about adolescent reproductive health should occur in the home and school settings, where adolescents are frequently found. Regarding adolescent reproductive health education, the environment of Islamic boarding schools is quite concerning. The distribution of Islamic boarding schools in Indonesia could be more balanced, with the province of Central Java ranking fourth after West Java, Banten, and East Java.

According to data from the Ministry of Religious Affairs, Republic of Indonesia (2020), approximately 3,787 Islamic boarding schools are dispersed throughout Central Java, with about 166,605 living students in the boarding schools and 132,269 non-living students in the boarding schools. In addition to schools in general, this sizeable number has the potential to serve as an ideal location for reproductive health education.

The service program in the Islamic boarding school environment has been carried out by Yulastini, et al., (2021) at the Nurul Haramain Narmada Islamic boarding School and Yani, et al., (2021) at the Darul Ulum Islamic boarding school using the lecture and discussion method.

Community service activities regarding adolescent reproductive health are also carried out by forming and developing healthy adolescent ambassadors at the Al-Ishlah girls' boarding school, Kampar Kiri sub-district (Laila, et al., 2021). Aziz, et al., (2022) carried out service activities at the Yatama Mandiri Islamic boarding school, Gowa Regency, with female student service participants, and the method used was giving questionnaires before and after giving lectures. Afiani, et al., (2022) also conducted community service at the As'adiyah Dapoko Islamic boarding school, Bantaeng Regency using the PowerPoint-assisted lecture method. Based on the service implementation carried
out by previous service members, it is known that there has yet to be a service regarding reproductive health that uses crossword puzzles and learning videos. Apart from that, the service carried out by the participants involved was only female students, while male students were not involved. This service is carried out using learning media that is adapted to the students' conditions and the participants involved include female and male students. Therefore, implementing this service program is important.

A lack of commitment still raises the topic of reproductive health in the Islamic boarding school environment; therefore, the service team is interested in providing reproductive health services in Islamic boarding schools, particularly in the Central Java region. The aim of this service is to increase the knowledge of female and male students in Islamic boarding schools regarding reproductive health by using crossword puzzle and learning video media.

Method

This service made use of Asset-Based Community Development (ABCD). When institutional and interpersonal environments are trustworthy and supportive of people's ability development, ABCD will likely assist vulnerable individuals most (Harrison, et.al., 2019). According to Russel (2022), Once effective ground-up community development has been initiated, additional efforts at reform and relief are more likely to have the desired and sustained impact. The ABCD approach was chosen because this approach helps service participants to know the internal conditions and possible changes that can be made (Rinawati, et, al. 2022). This service implementation consists of five phases: inculturation, discovery, design, and reflection (Salahuddin, et al., 2015). Figure 1 depicts the ABCD model's stages. The following are included in each phase of service implementation:

a) Inculturation: This stage is an introduction stage that aims to introduce and inform the objectives of the implementation of the extension program.
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b) Discovery: This stage is the stage of mapping assets owned by students.
c) Design: This stage is the stage of identifying opportunities that are adjusted to the situation and conditions of the students.
d) Define: This stage is the implementation stage of the program.
e) Reflection: This stage is an evaluation stage to determine the success rate of the service program that has been carried out.

**Figure 1.**
*ABCD Stages*

This service program was executed between July and August of 2022. This service program includes 50 students from classes X, XI, and XII of Senior High School / MA as service partners. There were 27 students, 23 of whom were female. The distribution of service participants by class is depicted in Graph 1. as follows. Counseling was provided at the Islamic Boarding School in Gunung Pati, Semarang.
Service data were collected by administering pre- and post-test questions regarding adolescent reproductive health. The pre-test questions are administered at stage Discovery, before the implementation of counseling, whereas the post-test is administered at stage Define, following the performance of the counseling program. The obtained data are then analyzed qualitatively and descriptively.

This counseling activity utilized pre-test and post-test questionnaire, counseling media in the form of crossword puzzle sheets, and educational videos about adolescent reproductive health. The event was captured with a mobile camera. Utilizing LCD projectors and laptops for counseling.

**Result and Discussion**

The service program is carried out under the ABCD method, described as follows.

a. **Inculturation**

The inculturation stage is an introduction phase completed on July 21, 2022. This activity is intended to inform the partner community about the purpose of the service program that will be implemented. In
addition, this phase aims to gain the service partners' confidence. The activities carried out in this phase are preliminary observations. Initial observations were conducted by interviews with teachers and managers at the Islamic boarding school.

b. Discovery

The discovery phase is a mapping of partner-owned assets. This action took place on July 29, 2022. The service team invited male and female students to complete a pre-test on reproductive health among adolescents. There are a total of 25 pre-test questions completed by students. The main questions prepared for the pre-test are presented in Table 1, as follows. This activity seeks to determine students' knowledge levels (males and females). The pre-test filling is shown in Figures 2. The pre-test results regarding adolescent reproductive health are presented in Graph 2.

Figure 2.
Pre-test filling by the male students.
**Table 1.**

*Pre-test Question*

<table>
<thead>
<tr>
<th>Number</th>
<th>Questions</th>
<th>Number item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Respondent's identity:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>a. Gender</td>
<td>1, 2</td>
</tr>
<tr>
<td></td>
<td>b. Age</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Class</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Understanding reproductive health in adolescents</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Meaning of puberty</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Characteristics of puberty in boys and girls</td>
<td>4, 5, 6,</td>
</tr>
<tr>
<td>5</td>
<td>Various reproductive organs in men and women</td>
<td>7, 8, 10</td>
</tr>
<tr>
<td>6</td>
<td>Menstruation</td>
<td>9</td>
</tr>
<tr>
<td>7</td>
<td>Fertilization</td>
<td>11, 12, 13, 14</td>
</tr>
<tr>
<td>8</td>
<td>Sexually transmitted infections</td>
<td>15, 16, 17, 18, 19, 20, 21</td>
</tr>
<tr>
<td>9</td>
<td>Pregnancy</td>
<td>22, 23, 24</td>
</tr>
<tr>
<td>10</td>
<td>Illegal drugs</td>
<td>25</td>
</tr>
</tbody>
</table>

**Graph 2.**

*The Pre-test Results*
c. Design

At this stage, opportunities tailored to the circumstances of service partners are identified. The date for this stage is August 13, 2022. After a pre-test on the service partner, the service team analyzed the service partner's work. Based on the analysis results, service partners' needs-specific reproductive health materials were developed. The materials developed are: 1) understanding adolescent reproductive health and the importance of maintaining healthy reproductive organs, 2) Organs found in the female and male reproductive systems, 3) How to maintain a healthy reproductive system, 4) Puberty, 5) sexually transmitted infections, 6) AIDS, 7) Healthy relationships between teenagers, and 8) Illegal drugs.

The service team chose the activities to conduct, namely counseling on adolescent reproductive health. The service team prepared materials such as PowerPoint, learning videos about adolescent reproductive health, and crossword puzzles as group worksheets.

d. Define

This round will take place on August 17, 2022. The activities consist of prepared reproductive health counselling based on the results obtained during the design phase. The service was delivered utilizing a crossword puzzle-assisted team game tournament (TGT) model and learning videos pertaining to adolescent reproduction as shown in Figure 4.
The first activity carried out by the service team was to form groups, each consisting of 5 people. Then, provide worksheets such as crossword puzzles regarding adolescent reproductive health. Before they work on the worksheets that have been distributed, students are invited to watch the video first and then take notes on the material in the video. Students are given approximately 30 minutes to answer the questions on the worksheet.

The next activity is discussing the questions on the worksheet. The method used is a TGT titled "Who Dares Quiz". The service team read the questions and then answered the students in groups. The group that is fastest in raising their hand will be appointed to answer the questions and get points. Next, the service team will review whether the explanation is correct and explain it back to the students. Figure 4. Shows group work activities of female students when filling in worksheets.
After discussing the questions on the worksheet and review from the service team, the next activity is calculating the highest group score and distributing prizes. Then, the students returned to their respective places to do the post-test, which contained the same 25 questions as the pre-test questions in the discovery stage. The post-test results are presented in Graph 3 as follows.

**Graph 3.**
*The Post-test Results*
After the data analyzed, a comparison of the results of the total pre-test average and the total post-test average was carried out. The average score on the pre-test was 74.73 percent, while the average score on the post-test was 83.15 percent. Based on the average score between the pre-test and post-test, it is known that service partners' knowledge has increased by 8.41 percent. Graph 4. displays the pre-test and post-test averages.

**Graph 4.**
*Average Pre-test and Post-test.*

Counseling based on the TGT model with the aid of crossword media and videos has proven effective in boosting the motivation of service partners to engage in the counseling activities outlined in Figure 5. The outcomes of this service are consistent with those of Pristy et al. (2021), who states that counseling adolescents about reproductive health using the appropriate media can increase the knowledge of service partners. Fayanto et al. (2022) also assert that educational games
facilitate learning, making learning more enjoyable. Damayanti (2022) also used “point of you” card media as a learning media when conducting training to reduce dating in teenagers, and the results of the service showed that using “point of you” card media was more effective in implementing training.

**Figure 5.**
*Counseling Activities with Service Partners.*

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e. Reflection

This is the final phase of a sequence of service programs. At this point, an assessment of the completed activities is conducted. The objective of the evaluation is to assess the implementation of counseling for adolescents' reproductive health. The service staff and administration of Islamic boarding schools carry out evaluation duties.

At this reflection stage, the service team distributed a questionnaire regarding evaluating the service program that had been implemented to be filled out by students and teachers at the Islamic boarding school. Details of the questions in the evaluation questionnaire are presented in Table 2. The analysis showed that 95.56% of the students stated that 1) counseling activities on adolescent reproductive health are important, 2) the material presented by the speaker can be understood well, 3) the material presented follows the
service program, and 4) crossword puzzle media and learning videos make it easier for students to understand the material on adolescent reproductive health.

According to the evaluation results, it is known that counseling activities on adolescent reproductive health are crucial and that service partners can comprehend the material presented by resource persons. In addition, systematic management of service programs and careful planning accompanied by well-delivered permits will also pave the way for good coordination. The implementation of service activities also needs to be adjusted to the schedule of student activities at the Islamic boarding school so that it does not interfere with the course of student activities in participating in activities at the Islamic boarding school.

Table 2.
Evaluation questionnaire

<table>
<thead>
<tr>
<th>Number</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is it essential to carry out community service programs on adolescent reproductive health?</td>
</tr>
<tr>
<td>2</td>
<td>Can the material presented by the service team be understood well?</td>
</tr>
<tr>
<td>3</td>
<td>Is the material presented by the service team in accordance with the service program on adolescent reproductive health?</td>
</tr>
<tr>
<td>4</td>
<td>Are the crossword puzzle media and learning videos used interesting and contain information that is appropriate to the adolescent reproductive health material?</td>
</tr>
<tr>
<td>5</td>
<td>Do the crossword puzzles and learning videos used help you understand material about adolescent reproductive health?</td>
</tr>
</tbody>
</table>
Conclusion and Suggestion

Based on the outcomes of the provided service, the following can be determined: 1) The average initial and final knowledge of service partners regarding adolescent reproductive health are 74.74 percent and 83.15 percent, respectively. 2) There is an expansion. 8.41 percent of service partners are knowledgeable. 3) It has been demonstrated that using Crossword media and learning videos on adolescent reproductive health increases the knowledge of service partners.

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