

EARLY PREVENTION EDUCATION ON THE RISK OF CHOLELITHIASIS DISEASE IN THE PEKAUMAN BANJARMASIN COMMUNITY

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Abstract

One of the triggers of cholelithiasis is an unhealthy lifestyle. Therefore, a healthy lifestyle must be implemented early to avoid cholelithiasis. This community service aims to provide an understanding of the importance of early prevention of cholelithiasis through healthy lifestyle education. The community service method is through education, targeting the Pekauman community, which totals 31 people. Education includes understanding cholelithiasis, causes and risk factors, signs and symptoms, types of cholelithiasis, the process of disease occurrence, and how to prevent cholelithiasis early. The education method is carried out through lectures, discussions, and demonstrations. Assessment of understanding is carried out through written tests before and after education. The evaluation results showed an increase in the average understanding score from 68.4 to 83.2 (score range 10-100). The process evaluation showed the activeness of education participants from the beginning to the end of the activity. This community service concluded that education can improve understanding of early prevention of gallstone disease. It is recommended that education on the prevention of cholelithiasis be carried out early in elementary and secondary schools.

Keywords: Prevention, Education, Cholelithiasis.

BACKGROUND

The challenge is the limited understanding of how to live a healthy lifestyle to avoid infectious and non-infectious diseases. One of the non-infectious diseases that needs to be prevented is gallstone disease. This is due to the high incidence of cholelithiasis in Indonesia.

The Data and Information Center of the Ministry of Health of the Republic of Indonesia (Pusdatin Kemenkes RI) estimates that in Indonesia, in 2030, around 21.3 million people will suffer from cholelithiasis (Pusdatin RI, 2018). The high number of cholelithiasis cases in Indonesia is also caused by the increasing number of cholelithiasis cases in children. Data from the Pusdatin Kemenkes RI (2018) recorded cholelithiasis cases in children at 0.004% in children aged 5-14 years. Data presented by the Indonesian Pediatrician Association (IDAI) (2017) shows that the incidence rate in children aged 15-25 years is 0.05% of the total population of Indonesia.

Given the causative factors of cholelithiasis, prevention must be done as early as possible. One way is through education. The following research

shows that education can be essential in increasing knowledge (Wahyuni, Prayitno & Yosi, 2019). The results of community service on education and early detection of cholelithiasis to reduce the prevalence and risk of degenerative diseases also show an increase in the knowledge of education participants (Muliasari, Hamdin, Ananto & Ihsan, 2019).

As an essential part of educating the nation's life, educational institutions must be one of the pillars involved in the early prevention of cholelithiasis in children. Nyamplungsari Islamic Boarding School, as one of the educational institutions, is one of the places that can be used as a partner in this community service. It is hoped that this community service can increase the community's knowledge or understanding regarding early prevention of cholelithiasis so that their growth and development are optimal and they can learn well and optimize their productivity in the future.

METHOD

Community service methods through preparation, implementation, evaluation, and

follow-up plans. The description of the stages of community service is as follows:

Preparation

The preparation stage is carried out by surveying the research location, community conditions, and community eating patterns and snacks at the Pondok location. This stage also examines the completeness of the community service administration and implementation.

Implementation

The implementation stage was carried out by educating the Pekauman Banjarmasin community with 31 participants. Education includes understanding cholelithiasis, causes and risk factors, signs and symptoms, types of cholelithiasis, disease occurrence, and early prevention of cholelithiasis. The education method was conducted through lectures, discussions, questions, answers, and demonstrations. Demonstrations were mainly carried out in the process of maintaining cleanliness and fitness. Assessment of understanding was carried out through written tests before and after education. The written test was the form of multiple-choice questions the community service team prepared. The assessment range was 10-100.

The implementation stage begins with a pretest, followed by providing material using LCD media and teaching aids in the form of hand rubs and masks. Hand rubs and masks are used to demonstrate how to wash hands and prevent infectious diseases, especially COVID-19 because community service is implemented during the COVID-19 pandemic, and cholelithiasis sufferers are susceptible to infection. The educational method involves lectures, questions and answers, and demonstrations.

Evaluation

Evaluation of community service activities is carried out with a posttest. This posttest measures understanding after education is carried out. The posttest score is then compared with the pretest score.

RESULTS AND DISCUSSION

Results

Community service is carried out through preparation, implementation, and evaluation stages. The description of these stages is as follows:

1. Preparation Stage

The preparation stage includes administrative preparation activities, such as making permits and proposals, which align perceptions between the team and partners. After the preparation stage is completed, community service is carried out.

2. Implementation Stage

The implementation stage of community service went well and smoothly. Counseling was carried out alternately with other lecturers and student teams. The results of community service related to participant understanding showed an increase in the average posttest score compared to the pretest. Table 1 illustrates the increase in participant understanding of the assessment.

Table 1. Average Comprehension Score Before and After Education

Assessment Results	Average		
	Pretest	Posttest	Value Enhancement
Level of Understanding	68.4	83.2	14.8

Table 1 shows an increase of 14.8 points in assessing understanding related to early cholelithiasis prevention education. This increase is excellent because if categorized, the level of understanding shifts from a sufficient value to a good value. Table 1 above shows the results of the average difference before and after education, with an increase in the understanding value of 14.8 points. These results align with the community service carried out by Saryanti and Nugraheni (2019) on Increasing Public Knowledge About Cholelithiasis Disease in Sukoharjo Regency, Central Java, by providing education or counseling methods. The counseling results showed an increased public understanding of cholelithiasis disease, categorized as good, from 67.83% to 90.43%. Likewise, what Rosyid, Hudiawati & Kristinawati (2019) did in a community service program through health education. The results of health education activities using lecture and demonstration models positively affected knowledge,

prevention efforts, and participants' attitudes about cholelithiasis disease.

Meanwhile, based on the research results of Fajriyah, Aktifah & Mugiyanto (2020) on the Education Package and Early Detection to Improve Diabetic Foot Care Behavior at the Pekalongan Regency Health Center show that the results of education and early detection of cholelithiasis affect patient foot care behavior with a $p\text{-value} = 0.001$. Healthy behavioral changes are the goals achieved after education because education is not just a transfer of understanding. This follows what Sari (2013) expressed: behavioral changes to be healthy through health education are not just a transfer of knowledge and attitudes from educators but how students can behave by aligning the environment, behavior, and humans to be balanced. Counseling or education can be interpreted as an effort carried out deliberately and planned so that behavioral changes occur in individuals, groups, or communities so that they know, want, and can solve their problems. Counseling or education aims to improve the quality and dignity of human life and life (Amanah, 2007).

Supporting factors for the success of health education include the use of media and learning methods that are adjusted to the characteristics of the community service participants. The learning media used are PowerPoint, video, and hand-washing demonstration media. The use of learning media is adjusted to the goals and objectives of learning. According to Miftah (2013), media, as an inseparable part of learning, needs attention from educators. Learning media is vital to facilitate students (learners). The presence of media in the learning process dramatically helps students understand what is being learned. Supriyono (2018) also explains choosing and using enjoyable, effective, and efficient media. There are at least five things to consider when choosing media. The five things to consider in selecting media are (1) media must be made as simple as possible so that it is straightforward and easy for students to understand; (2) media is designed according to the subject matter to be delivered; (3) media is designed not to be confusing and not too complicated; (4) without reducing the meaning and function of the media, the media making materials are made as simple as possible and

easy to obtain, (5) learning media can be designed in the form of models, pictures, structured charts, and others with cheap and easily obtained materials (Supriyono, 2018). These five things have been done in implementing community service at the Nyamplungsari Petarukan Pemalang Quran Tahfidh Islamic Boarding School. The media used are PowerPoint presentations, leaflets, LCDs, hand-washing props, and educational videos.

Education conducted in the Al Fath Islamic Boarding School community also uses interactive learning methods through lectures, questions and answers, dialogues, and demonstrations. According to Ulfah and Saefuddin (2018), learning methods are ways educators achieve learning goals. Learning methods can also be interpreted as a way of presenting material to students to achieve learning goals. The conclusion is that learning methods function as a way to achieve learning goals. The position of the method is one component of learning. Several things need to be considered in choosing a learning method, including the goals to be achieved in learning, the abilities and backgrounds of students, the abilities and backgrounds of educators, the state of the ongoing learning process, and the available tools or facilities. The definition of a lecture in terms of language is a verbal narration or explanation by educators to students. In the lecture method, there is interaction between educators and students because there are those who "speak" and "listen" (Tambak, 2014).

The question-and-answer method is also used to attract students' interest in participating in activities. The question-and-answer method is carried out by educators throwing questions to students, who are then invited to answer the questions. This method effectively attracts interest so that learning is not monotonous. Ahmad and Tambak's (2017) research on the relationship between the question-and-answer method and students' interest in learning in Islamic religious education subjects shows a significant relationship between the question-and-answer method and students' interest in learning in Islamic religious education subjects. The

demonstration learning method is used to strengthen understanding.

The demonstration learning method based on the research of Fince, Ramadhan, and Gagaramusu (2015) on the application of the demonstration method used to improve student learning outcomes on the material of the causes of motion of objects in class 1 of SDN Morowali Regency showed an increase in learning. The study concluded that the demonstration method can improve learning outcomes.

One way to measure educational success is by conducting a learning evaluation. In this community service activity, a learning evaluation is also performed. Learning evaluation describes the quality of learning outcomes, which concerns values or meaning. The description of quality in learning evaluation is a consequence of the results of the evaluation process. The evaluation process is carried out systematically and continuously and is planned to follow procedures and rules continuously in the learning process and at the end of learning. The evaluation aims to determine the quality of students and educators, especially those related to values and meaning (Arifin 2013 in Asrul, Ananda, and Rosnita 2014).

3. Evaluation

Learning evaluation shows increased participants' understanding of early prevention of gallstone disease. This understanding is critical because cholelithiasis is a disease whose percentage is growing from year to year. According to data from the Data and Information Center of the Ministry of Health of the Republic of Indonesia (Pusdatin Kemenkes RI), it is estimated that in Indonesia in 2030, there will be around 21.3 million people suffering from cholelithiasis. This increase in cases is also due to increased instances of cholelithiasis in children. Data from the Pusdatin Kemenkes RI (2018) recorded cases of cholelithiasis in children of 0.004% of children aged 5-14 years.

Meanwhile, according to the Indonesian Pediatrician Association (IDAI) (2017), in children aged 15-25 years, the incidence of cholelithiasis is 0.05% of the entire population of Indonesia (Indonesian Pediatrician

Association (IDAI) (2017). Based on research by Prasetyani and Sodikin (2017) regarding the analysis of factors that influence the incidence of cholelithiasis, it was found that obesity is the most dominant factor related to the incidence of cholelithiasis. Obesity is defined as excessive fat accumulation due to an imbalance between energy intake and expenditure over a relatively long period. Obesity occurs due to poor diet, suboptimal activity, and exercise. Another study that focused on factors related to the incidence of cholelithiasis by Kurniawaty and Yanita (2016) showed that obesity and age can increase the risk of cholelithiasis. This study shows that the incidence of obesity needs to be addressed by improving people's lifestyles and diets. Lifestyle improvements are made by reducing stress, getting enough sleep, and doing enough activity. Dietary enhancements are made with low-carb foods, not many instant foods, and many preservatives, thickeners, and sweeteners. Preventive measures such as those above must be taken early on because there is a tendency for children to consume unhealthy foods.

Cholelithiasis is usually diagnosed at puberty or older. Symptoms that appear are often accompanied by darker skin. Insulin resistance or problems with insulin function will cause some areas of the child's skin darker, such as the armpits and neck (Directorate of Prevention and Control of Non-Communicable Diseases, Ministry of Health of the Republic of Indonesia, 2018). Symptoms that appear due to cholelithiasis are eating a lot, drinking a lot, urinating a lot or wetting the bed, drastic weight loss in the 2-6 weeks before diagnosis, getting tired quickly, and getting angry easily. Eating a lot occurs because insulin is not enough to process the food eaten, so the cells cannot properly use it. As a result, the cells will continue to feel malnourished. Drinking a lot occurs due to dehydration at the cellular level. Urinating a lot or wetting the bed occurs because the body drinks a lot. Drastic weight loss in someone diagnosed with cholelithiasis occurs because the body's inability to absorb blood sugar causes muscle and fat tissue to shrink.

People with cholelithiasis can also experience emergency problems. Emergency signs to watch out for include dehydration, shortness of breath, shock, and ketone-smelling breath (Directorate of Prevention and Control of Non-Communicable Diseases, Ministry of Health of the Republic of Indonesia, 2018). Shortness of breath can be caused by latent damage to body cells in the lungs due to angiopathy or neuropathy. Complaints of dehydration can be caused by hemoconcentration due to high blood sugar levels. Shock can occur if dehydration is not treated or decreased consciousness due to high blood sugar, which results in reduced blood supply to the brain. The appearance of ketone-smelling breath can be caused by fat burning caused by the body's inability to process food (metabolism) from carbohydrate materials. This condition is a sign of diabetic ketoacidosis.

The consequences of cholelithiasis are numerous. All parties must work together so that the incidence of cholelithiasis does not increase. Therefore, activities such as community service that have been carried out to prevent cholelithiasis early in children are positive. This activity needs to be carried out continuously by targeting children and adults.

CONCLUSION

This community service concludes that education on early prevention of cholelithiasis can improve the understanding of the Pekauman Banjarmasin community. Suggestions for further community service include providing training in the form of counseling on proper diet to prevent diabetes mellitus early on in the community and to managers.

REFERENCES

- Afc Amanah, S. (2007). The meaning of counseling and transformation of human behavior. *Journal of Counseling*, 3(1).
- Ahmad, MY, & Tambak, S. (2017). The Relationship between Question and Answer Method and Students' Learning Interest in Islamic Religious Education Subjects. *Al-Thariqah Journal of Islamic Religious Education*, 2(1), 89-110.
- Asrul, Anada, R & Rosnita (2014). Learning evaluation. Bandung, West Java: Cita Pustaka Media Directorate of Prevention and Control of Non-Communicable Diseases, Ministry of Health of the Republic of Indonesia, (2018). Children can also have diabetes. Retrieved from <http://www.p2ptm.kemkes.go.id/kegiatan-p2ptm/dki-jakarta/anak-juga-bisa-diabetes> [February 10, 2021].
- Fince, F., Ramadhan, A., & Gagaramusu, Y. (2015). Application of Demonstration Method to Improve Student Learning Outcomes on the Material of Causes of Moving Objects in Class 1 of SDN Dampala, Bahodopi District, Morowali Regency. *Online Creative Journal*, 3(1).
- Fajriyah, NN, Aktifah, N., & Mugiyanto, E. (2020). Education Package and Early Detection to Improve Diabetic Foot Care Behavior at Pekalongan District Health Center. *Gaster*, 18(1), 12-20.
- Indonesian Pediatrician Association (IDAI). (2017). Beware of Diabetes Mellitus in Children. Retrieved from <https://www.idai.or.id/artikel/klinik/kekuhan-anak/waspada-diabetes-mellitus-pada-anak> [February 10, 2021].
- Kurniawaty, E., & Yanita, B. (2016). Factors related to the incidence of type II Diabetes Mellitus. *Majority Journal*, 5(2), 27-31.
- Miftah, M. (2013). The function and role of learning media as an effort to improve students' learning abilities. *KWANGSAN Journal*, 1(2), 95-105.
- Muliasari, H. Hamdin, CD, Ananto, AD, & Ihsan. M. (2019). Education and early detection of diabetes mellitus as an effort to reduce the prevalence and risk of degenerative diseases. *Journal of Education and Community Service*, 2(1), 76-79.
- Data and Information Center of the Ministry of Health of Indonesia. (2018). World Diabetes Day 2018. Retrieved from <https://pusdatin.kemkes.go.id> [February 10, 2021]
- Prasetyani, D., & Sodikin, S. (2017). Analysis of Factors Affecting the Incidence of Type 2 Diabetes Mellitus (DM). *Al-Irsyad Health Journal*, 1-9.
- Rosyid, FN Hudiawati, D. & Kristinawati, B. (2019). Increasing knowledge and efforts to prevent diabetes mellitus through health education. *Journal of Community Service*, 7(2), 91 – 94.
- Saryanti, D & Nugraheni D. (2019). Increasing public knowledge about diabetes mellitus. *Journal of Community Service and Empowerment.*, 3(1), 111-116.
- Sari, IPTP (2013). School health education as a process of changing student behavior. *Indonesian Journal of Physical Education*, 9(2).
- Tambak, S. (2014). Lecture Method: Concept and Application in Islamic Religious Education Learning. *Tarbiyah Journal*, 21(2).

- Ulfah, M & Saefuddin. (2018). Skilled in selecting and using learning methods. *SUHUF*, 30(1), 35-56.
- Wahyuni, K. Prayitno, AA & Yosi, W. (2019). Effectiveness of Education for Type 2 Diabetes Mellitus Patients on Knowledge and Outpatient Glycemic Control at Anwar Medika Hospital. *Jurnal Pharmascience*; 6(1), 1-9.