



Rabies Education for Junior High School Students to Prevent Rabies in the Community at Nurcahaya Padang Bulan Medan Private School

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ABSTRACT

Rabies is a zoonotic acute infectious disease that can be transmitted from animals to humans through the bite of a rabies-positive dog. Rabies is caused by a Lyssavirus virus, which belongs to the family Rhabdoviridae, and is transmitted through the bite of a rabies-positive animal such as a dog. The disease is often found in dogs, cats, and monkeys. In humans, rabies is transmitted through dog bites, and deaths from rabies occur every year with a case fatality rate of 100 per cent. According to WHO, rabies cases annually reach 60,000 people worldwide, with 95 per cent of cases occurring in Africa and Asia. The incidence rate of rabies is 40 per cent, with most cases occurring in children. Education methods were quasi-experimental to increase children's knowledge of rabies prevention and control in community service, especially junior high school students and the community. There were 40 respondents involved in this education program, beginning with a pretest. The intervention was conducted in several sessions for in-depth interaction and better understanding. The intervention increased the knowledge of students in the post-test. Data analysis was performed using descriptive statistical methods. Observation and documentation were used to strengthen the pre-and post-test findings and observe the level of participation of junior high school children, measured by attendance and engagement. The results showed that the education program could empower junior high school students, increase their knowledge, and encourage active contributions in preventing rabies.

Keyword: Nurcahaya Junior High School, Rabies

1. Introduction

Rabies is a deadly virus spread by the bite of a rabies-transmitting animal (GPHR), caused by a neurotropic virus in the family Rhabdoviridae, genus Lyssavirus. Potential human exposure and death from rabies occur annually, with a case fatality rate of 100 per cent. Rabies is transmitted through bites and non-bites (scratches or licks on open skin/mucosa) by animals infected with rabies virus. The rabies virus cannot enter through intact skin [1]. After entering, the virus will stay for two weeks and be replicated in the muscle tissue around the bite wound. Without clinical symptoms, the virus travels through peripheral nerves to the central nervous system. After reaching the brain, the virus will replicate rapidly and spread widely to all brain nerve cells or neurons, especially cells of the limbic system, hypothalamus and brain stem. [2].

According to [3], rabies cases annually reach 60,000 people worldwide, with 95 per cent of cases occurring in Africa and Asia. Forty per cent of these cases are children. Public education about rabies is crucial because there is still a lack of understanding. Many people do not know how the disease is transmitted, the symptoms, and the preventive measures that can be taken. Increasing their knowledge, people can understand the importance of pet vaccination and other preventive measures. In addition, counselling can help reduce the transmission risk by teaching people how to avoid contact with potentially infected animals.

It will also raise awareness of the importance of early medical treatment after possible exposure to rabies, thus preventing the disease from progressing to a more severe and fatal stage. Therefore, rabies education is not only crucial for individual protection but also for the overall health of the community. The community in Nurcahaya Junior High School still does not know the dangers of rabies bites, how to prevent their pets from contracting rabies and how to administer first aid in the event of a dog bite as a preventive measure against rabies. This has a significant impact on public health. Rabies-causing animal bites are still common because pets are not leashed and accessible outside the home, pets have not been vaccinated against rabies, owners do not provide mouthguards or brangus, and no one in the community is willing to kill unowned stray dogs that roam.

Therefore, to increase awareness of rabies among children, especially Nurcahaya Junior High School students and the surrounding community, rabies education counselling is needed so that Nurcahaya Junior High School students and the surrounding community have a deeper understanding of rabies prevention and control.

2. Implementation Methods

To solve this problem, the service team actively increased students' knowledge of rabies prevention at Nurcahaya Junior High School to reduce disease incidence. The Community Service Team comprises lecturers and students from the Faculty of Public Health, Universitas Sumatera Utara. The main goals are to get students more aware of the dangers of rabies bites, how to prevent their pets from contracting rabies and how to administer first aid in the event of a dog bite as a preventive measure against rabies.

In general, activities consist of four stages, namely:

1. Stage I Students are given a pretest to test their knowledge about rabies. This pretest consists of the definition of rabies, microorganisms causing rabies, and rabies prevention
2. Stage II Education Process. This process uses teaching methods such as lectures, questions and answers. The topics given are the history of rabies, rabies in the human body, rabies vaccination, and rabies prevention
3. Stage III Fun quiz for students that can answer lecture questions. The questions are about the topic that are given beforehand
4. Stage IV Students are given a post-test to test their knowledge about rabies after the education This post-test consists of the definition of rabies, microorganisms causing rabies, and rabies prevention

After these community service activities, students will be more aware of the importance of rabies prevention. They will continue to inform rabies prevention at school and home.

3. Result and Discussion

This activity involved counselling for 40 students of Nurcahaya Junior High School. According to the agreed schedule, this activity was carried out on July 23, 2024, starting at 09.00 AM and continuing until 12.00 PM in the classroom. This activity uses the counselling method as an education. This activity opened with a welcoming speech by Jumiati, S.Pd, as Nurcahaya Junior High School principal, as seen in Figure 1.



Figure 1. Opening remarks by Jumiati, S.Pd

The event continued with students being given a pretest to test their knowledge about rabies, as seen in Figure 2. This pretest consists of the definition of rabies, microorganisms causing rabies, and rabies prevention. After the pretest, the lecturers from FKM USU were given education about the history of rabies, rabies in the human body, rabies vaccination, and rabies prevention which can be seen in Figure 3.



Figure 2. Students being given pretest



Figure 3. Lecturers of FKM USU were given education about rabies

After the education, students were given fun quizzes that could answer lecturers' questions. The questions are about the topic provided beforehand, as seen in Figure 4. If the students could get the correct answer, they were given a prize from the lecturer. Followed by students are given a post-test to test their knowledge about rabies after the education. This post-test consists of the definition of rabies, microorganisms causing rabies, and rabies prevention, which can be seen in Figure 5.



Figure 4. Fun quiz

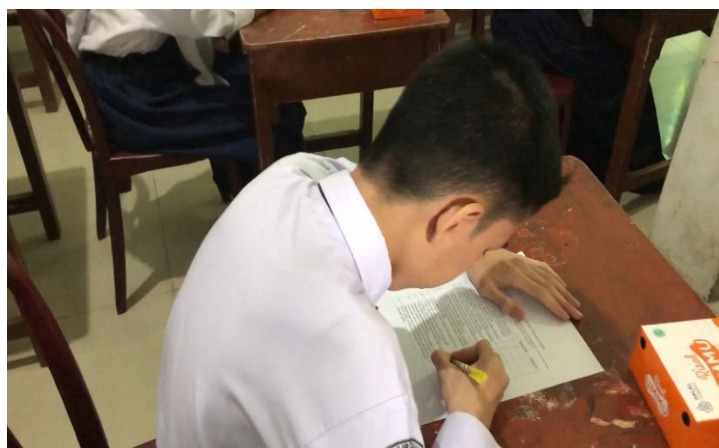


Figure 5. Students being given post-test



Figure 6. Group photo of the community service team with the teacher and the students of Nurcahaya Junior High School

Based on the data analysis of 40 respondents, it was found that the counselling activity succeeded in increasing the knowledge of Nurcahaya Junior High School students about rabies. The counselling was designed to provide in-depth information and education on rabies prevention. The materials presented included the history of rabies, rabies in humans, anti-rabies vaccine, and rabies prevention.

Before the counselling activity, respondents had an average score of 9 on their knowledge of rabies. This indicates that junior high school students' understanding of rabies is quite good. However, knowledge still needs to be improved. After the counselling, the average score of respondents increased by 44%. This increase reflects that the counselling helped junior high school students understand rabies better. Through interactive and easy-to-understand delivery, counselling participants could absorb the information well. The following are the average scores from the pretest and post-test:

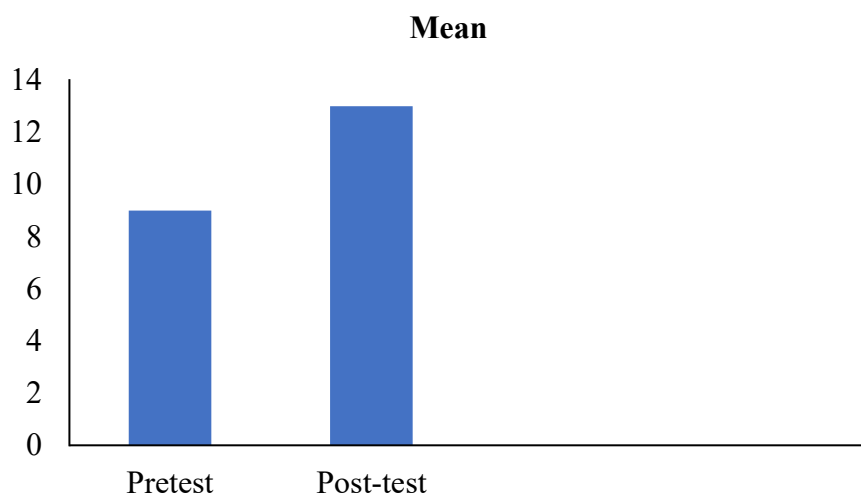


Figure 7. Chart Mean Pretest and Pos-test

4. Conclusion

The education activities have been proven effective in increasing Nurcahaya Junior High School students' awareness of rabies, with an increase in the mean score from 9 and an increase of 44%. This shows that the education method can significantly improve knowledge and understanding of rabies.

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