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Education and Cadre in Improving Knowledge of One Health in Elementary School-Age Children

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ABSTRACT

Purpose – Elementary school students can become agents of change so that education on the concept of One Health. The purpose of this community service is to increase knowledge about the concept of One Health in students and the regeneration of Little One Health Ambassadors at SDN Kalisari II Surabaya City.

Design/methodology/approach – The method was counseling on the concept of One Health, and the selection of Little One Health Ambassadors. Activities were carried out in August-September 2023. The educational material was from One Health Lessons and have been adapted for children aged 8 - 10 years. One Health Ambassadors were selected based on the results of the assessment of poster work about One Health, and mastery of One Health material. Counseling activities on One Health education were carried out in the fourth and fifth grades with a total of 80 students.

Findings – The results showed that the education provided can improve the knowledge of the target group about the concept of One Health (p -value = 0.003). The first winner of One Health ambassadors was chosen who indicated that he mastered the material about One Health and his work was the most interesting and could present it well.

Originality/value – Community service activities produce changes that are by external targets.

KEYWORDS: Education, One Health, Students, Elementary School

ABSTRAK

Tujuan – Siswa sekolah dasar dapat menjadi agen perubahan sehingga mendapat pendidikan konsep One Health. Tujuan dari pengabdian masyarakat ini adalah untuk meningkatkan pengetahuan tentang konsep One Health pada siswa dan kaderisasi Duta Cilik One Health di SDN Kalisari II Kota Surabaya.

Desain/metodologi/pendekatan – Metode yang dilakukan adalah penyuluhan konsep One Health, dan pemilihan Duta Cilik One Health. Kegiatan dilaksanakan pada bulan Agustus-September 2023. Materi edukasi berasal dari One Health Lessons dan telah diadaptasi untuk anak usia 8 – 10 tahun. Duta Cilik One Health dipilih berdasarkan hasil penilaian karya poster tentang One Health, dan penguasaan materi One Health. Kegiatan penyuluhan pada edukasi One Health dilaksanakan pada kelas IV dan V dengan jumlah siswa



sebanyak 80 orang.

Hasil – Hasil penelitian menunjukkan bahwa edukasi yang diberikan dapat meningkatkan pengetahuan kelompok sasaran tentang konsep One Health ($p\text{-value} = 0,003$). Pemenang pertama Duta Cilik One Health dipilih yang menunjukkan bahwa ia menguasai materi tentang One Health dan karyanya paling menarik serta mampu menyajikannya dengan baik.

Originalitas – Kegiatan pengabdian kepada masyarakat ini menghasilkan perubahan yang sesuai dengan sasaran eksternal.

KATA KUNCI: Edukasi, One Health, Siswa, Sekolah Dasar

PENDAHULUAN

Over the past two decades, non-natural disasters in the form of various types of infectious disease outbreaks have re-emerged in many countries, including Indonesia. This phenomenon is known as Emerging Infectious Diseases (EID). About 60-75% of EID cases are zoonotic. Zoonoses are diseases that are transmitted from animals to humans, either farm animals or wild animals ([Salyer et al., 2017](#)). Zoonoses are infectious diseases that are transmitted between animals and humans, and are a major source of infectious diseases. According to a study conducted by International Livestock Research India, 13 zoonoses are responsible for 2.4 billion cases of human illness and 2.2 million deaths per year. ([Jones et al., 2008](#)).

One of the solutions to prevent zoonotic threats is through the One Health approach. The One Health approach is gaining attention as a standardized approach globally to combat emerging infectious diseases and zoonotic threats ([Arulmohi et al., 2017](#)). One Health is a collaborative, multisectoral, coordinated, and transdisciplinary approach that works together at local, regional, national, and global levels - with the goal of achieving optimal health outcomes by recognizing the interconnections between humans, animals, plants, and the environment ([CDC, 2022](#)). Research conducted by [Zucca et al. \(2021\)](#) showed that more than a third of the students studied exhibited a deep ignorance of zoonotic risks and a poor understanding of the One Health concept. The researchers believe that One Health prevention teaching and practical training should be included in every school curriculum ([Zucca et al., 2021](#)).

Education will play a very important role in realizing the One Health concept ([Barrett et al., 2011](#)). The One Health approach needs to be educated to elementary school students so that they can understand and realize from an early age that it is necessary to maintain the interaction between humans, animals and the environment so as not to cause a zoonosis. Primary school students can be agents of change in their school and home environment, so that education on the One Health concept can be practiced in their daily lives.

Kalisari II State Elementary School (SDN) is one of the elementary schools in Surabaya City which is located in a strategic area that needs to be given socialization of knowledge on the importance of One Health implementation because it is located in an urban area with densely populated conditions, and the need to maintain health from the aspects of humans, animals and the environment. In order to increase the insight and awareness of students of SDN Kalisari II to behave, and maintain their interaction with animals and the surrounding environment, it is necessary to introduce the concept of One Health to them. The necessary resource aspect is to form One Health ambassadors from

elementary school students. One Health ambassadors are students who have gone through a special selection process and were selected because they are creative and have interesting thinking and are able to develop a brilliant idea related to the application of the One Health concept in their school and living environment.

Based on this background, the One Health approach education was carried out, and the formation of Little One Health Ambassadors at SDN Kalisari II Surabaya City students. One Health Approach education is carried out as an effort to increase students' knowledge of the One Health concept. The purpose of this community service activity is to increase knowledge about the concept of One Health in students and regenerate Little One Health Ambassadors at SDN Kalisari II Surabaya City.

METODE

The form of this community service activity was counseling on the concept of One Health for elementary school students, and the selection or regeneration of Little One Health Ambassadors. The partner of community service activities is SDN Kalisari II Surabaya City. Activities were carried out in August-September 2023. The target population for this community service activity is all students of SDN Kalisari II Surabaya City. The subjects who are participants in this community service are students of 2 classes. The service partner provides 2 classes, namely grade 4 and grade 5 with a total of 80 students. Educational materials in this activity are materials from One Health Lessons that have been adapted for children aged 8 - 10 years in the form of definitions of One Health, zoonoses, vaccines, species, and how infectious diseases are transmitted to humans. In addition, material on examples of zoonotic transmission in humans such as Anthrax and Toxoplasmosis. At the end of the material, zoonosis prevention was presented.

The method used in this One Health knowledge improvement activity was counseling, and question and answer with participants. The media used in this counseling were educational videos, pocket books, LCD projectors to display presentation materials about One Health and animal guessing games. After the counseling, then the selection of cadres or regeneration of One Health ambassadors was carried out. The nomination of One Health ambassadors was obtained from the accumulated assessment of the results of the assignment to make image education media and from the results of the pre-test and post-test. Then the five selected nominees would be competed by presenting the results of the pre-creation of educational images on the theme of One Health, and answering questions from the jury.



Figure 1: One Health Education Pocket Guide for Elementary School Students

Evaluation of the results of community service was carried out by giving pre-test and post-test to the target group. In accordance with the objectives of the service, the evaluation was carried out by looking at the increase in knowledge scores about the concept of One Health for elementary school children. Knowledge was measured based on the subject's knowledge of 10 multiple choice questions. Pre-test and post-test were conducted using a questionnaire.

HASIL DAN PEMBAHASAN

Counseling activities on One Health education were carried out in the target group of class IV and V SDN Kalisari II Surabaya City with a total of 80 students with details of 30 (37.5%) class IV students and as many as 50 (62.5%) class V students who participated in community service activities. Most of the students were male as many as 42 (52.5%) and as many as 38 (47.5%) are female. Counseling was a conscious and planned effort to improve human behavior according to the principles of education in the field of health. (Nurmala et al., 2018). Knowledge can influence a person's behavior including behavior in the field of Health (Indriawati & Darmawati, 2021).

One Health education in the form of counseling the target group about the One Health Concept was held on August 29, 2023 in the hall of SDN Kalisari II Surabaya City. Before the training began, the target group worked on pre-test questions. The activity was then continued by providing counseling in the form of One Health education materials, and quizzes. The activity then continued by providing counseling in the form of One Health educational material through pocket books and educational videos. Pocket books are useful as student literacy materials. Health literacy is an important outcome of health education discussions related to schools and health promotion in the 21st century. The acquisition of skills that determine an individual's motivation and ability to access, understand and use health information in childhood is critical (Knisel et al., 2020).

Before the educational activities on the first day ended, the target group was given an assignment. The assignment was to create a two-dimensional or 3-dimensional poster on topics including One Health, Environmental Hygiene, Rabies Prevention, and Toxoplasmosis Prevention. After announcing the assignment, the activity ended by giving a

post-test. The pre-test and post-test activities were intended to measure the target group's level of knowledge about One Health.

After One Health Education was held, the activity was continued on Tuesday, September 5, 2023, at SDN Kalisari II Surabaya City, namely the Selection of One Health Little Cadres. Five students have been selected consisting of 1 student from class IV, and 4 students from class V. The five students were selected based on the accumulated assessment results from the poster assessment (60%) and the pre and post-test scores of the activities on the first day (30%). Then, the five students were asked to bring their posters and present them in front of the competition jury.



Figure 2: The nominees for the One Health Little Cadre of SDN Kalisari II

Figure 2 showed that the five children who were selected as nominees for the One Health Little Ambassadors introduced themselves and showed their work to the judges. After presenting their posters, they were asked 5 questions about One Health that they had learned before. Each child was given 10-15 minutes per student. The student who got the highest score would be crowned the first champion to become the Little One Health Ambassador at SDN Kalisari II Surabaya City. In addition, all participants involved in community service received certificates as participants and as well as nominees and champions in the regeneration of students about One Health also received certificates and trophies in the hope of increasing their confidence. The role of little health cadres in elementary schools is formed for student empowerment where little health cadres are able to carry out the role of being able to get students involved in activities and participate with social spirit capital, the condition of students who are likely to be less concerned about health, the task of these little cadres is to invite those who are less concerned about clean and healthy living behavior in their schools (Fitriani et al., 2019).

The results of community service activities show that the education provided can improve the target group's knowledge of the One Health concept. The following Table 1 displays the results of the T-test to measure the difference in students' knowledge about One Health from the pre-test and post-test results.

Table 1. Pre-test and Post-test Results

Test	N	Mean	Min.	Max.	<i>p-value</i>
Pre-test	80	5.83	1	9	0.003
Post-test	80	6.49	1	10	

Table 1 showed that the average pre-test score of participants was 5.83 with the lowest score of 1 and the highest score of 9. After the training, the average post-test score of participants was 6.49 with the lowest score of 1 and the highest score of 10. Table 1 also showed that there was an increase in pre-test and post-test scores, with a p value ≤ 0.003 . Therefore, there was a significant increase in knowledge after One Health education was provided to elementary school students. Changes in the level of knowledge of elementary school students were influenced by educational activities through counseling. In addition, the use of audio-visual media during counseling can increase the knowledge of participants. Counseling activities can be used to improve the knowledge of target groups (Susanto et al., 2021). This community service in providing educational material also uses video media which is audio-visual media. Research conducted by Sari & Prastikalana (2022) shows that simulations and demonstrations improve the psychomotor aspects of students so that they better understand first aid material. In addition, the regeneration of little doctors which is also strengthened by the provision of certificates is expected to increase students' confidence to improve clean and healthy living behaviors and disseminate health information to their peers Sari & Prastikalana (2022).

SIMPULAN

The community service activities went well and succeeded in increasing students' knowledge, as evidenced by the significance of the difference in knowledge before and after being given the pre-test and post-test. In addition, One Health regeneration in students can also increase students' knowledge of the One Health approach. The community service team suggested to the school to monitor and evaluate the selected One Health cadres to continue to educate friends in their school environment about the importance of maintaining interactions between humans, animals, and the environment to realize a healthy one, and continue to apply the One Health knowledge media pocket book they have received.

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