

## Education on Making Floor Cleaning Soap from Used Cooking Oil (SUPERMIJEL)

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### Abstract

Waste cooking oil is also called used oil used for frying. The use of used cooking oil can have an impact on our bodies, and indiscriminate disposal of the waste can pollute the environment and waters. So, there needs to be a smart solution to overcome this problem. This community service activity aims to socialize the dangers of used cooking oil and provide knowledge about other benefits of used cooking oil. The method used in this activity is the delivery of materials and direct practice of making products. The evaluation of this activity can be seen from the questionnaires distributed before and after the activity started. The results of the evaluation activities were an increase in knowledge about the dangers of using cooking oil repeatedly for health. In addition, residents gained new knowledge and direct practice about other benefits of used cooking oil, namely, floor cleaning soap from used cooking oil. This community service activity can be followed by the participants well and with high enthusiasm.

**Keywords** : Used cooking oil, floor cleaning soap, housewife

### INTRODUCTION

Tulungagung Regency is located in East Java where most of the area is rice fields, and one of them is Jabalsari Sumbergempol Tulungagung Village. People live in that area mostly work as farmers, besides those are also dominated by housewives. One of the duties and obligations of a housewife in her daily life is cooking. The need for cooking was high, including processing raw food into ready-to-eat food, which is processed using a frying pan. So, it requires supporting materials such as cooking oil. Cooking oil is the result of purification from plants (vegetable oil) which can be used to fry food (Putra et al., 2016).

Waste oil is also called used cooking oil. It means that the used cooking oil is used for frying or cooking many times or repeatedly (Martha et al, 2020). The use of used cooking oil for frying food causes the nutritional content of food to decrease (Kusumaningtyas et al, 2018), and the resulting waste also increases. A large amount of cooking oil usage and the high price of cooking oil has led to the emergence of the habit of reusing cooking oil that has already been used. This is not supported by the knowledge of the residents, especially housewives, about the dangers of using used oil for health. In addition, there is a lack of knowledge about the careless disposal of used oil which can pollute the environment and have an impact on health (Pujiati & Retariandalas, 2019). According to research by Nane et al (2014), the damage of the ecosystems in the water is caused by used cooking oil that is disposed carelessly without regarding the life in the water.

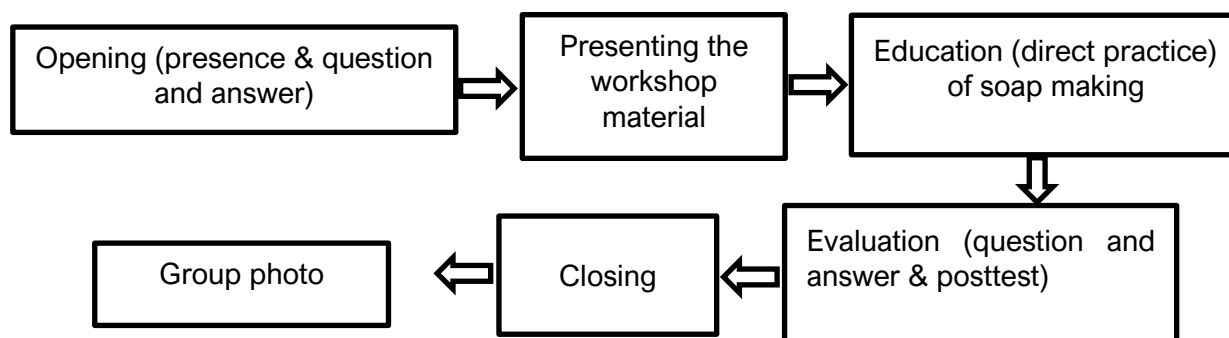
It is necessary to overcome these problems in order the waste cooking oil is no longer a problem in the environment or water. The solution to this problem is by recycling the waste cooking oil into something that can be useful. Besides, it can empower housewives in processing used oil into useful goods (Rahayu et al, 2020). One of the alternatives for using used cooking is making floor cleaning soap. Floor cleaning soap made of used oil (SuperMiJel) is one step and an innovation that is easy to do.

Other problems from the results of a survey by the service team with residents of Jabalsari Sumbergempol Tulungagung Village, namely: (1) Residents still often use used oil for cooking; (2) Lack of knowledge about the impact of using used oil on health; (3) Residents do not understand about the other benefits of used cooking oil; and (4) Residents do not know how to

make products from used oil. Based on these problems, the service team provides knowledge about used oil, the impacts and other benefits of used oil. As well as providing the skills to make products from used oil, which involve residents with the hope that it can be practiced independently by residents later.

### METHOD

Figure 1 shows the steps for implementing community service. The implementation of community service activities begins with the opening and ends with a group photo after the liquid soap-making workshop.



**Figure 1.** The steps for implementing community service

The implementation of this community service activity took place at the Jabalsari Sumbergempol Tulungagung Village Hall, on Sunday, November 13, 2022, from 10.00 a.m. until finished. Participants who present were residents of Jabalsari Village, consist of fathers and housewives. Participants who attend the activities must fill in the attendance list provided by the dedicated team. The method of carrying out this activity starts with the distribution of questionnaires before socialization and product manufacturing demonstrations (Figure 2). The purpose of distributing the questionnaire was to see how far the participants' knowledge was about the dangers and other benefits of using oil.



**Figure 2.** Questionnaire filling

The next stage is the delivery of material by the presenters about the impacts and benefits of used oil (Figure 3). Material about the dangers of used cooking oil was delivered by the

presenters with the hope that the participants would know the impact of using used cooking oil on health and could reduce its use for frying food. In addition, used cooking oil can be recycled or reused into a product, one of which is floor cleaning soap. The material delivery session was accompanied by a question and answer session from the participants.



**Figure 3.** Submission of Materials

The next activity was a demonstration of making floor-cleaning soap from used cooking oil (Figure 4). This demonstration was practiced together with the participants, especially housewives. First, the speaker prepared materials and tools which were then practiced directly by representatives of the participants. The purpose of this demonstration is to provide skills for participants with the hope that later they will be able to practice making their floor cleaning soap independently. After all stages of the activity were carried out, the last session was the distribution of questionnaires after the activities and group photos. The distribution of questionnaires after the activity aims to evaluate the results of the community service.



**Figure 4.** Supermijel Making Practice

## RESULTS AND DISCUSSION

This activity was attended by ladies and gentlemen from the residents of Jabalsari Sumbergempol Tulungagung Village. Based on the results of the questionnaire that were filled out by the participants, the majority of the participants worked as farmers and housewives. Meanwhile, based on the level of education, the majority graduated from elementary and junior high schools. The results of the questionnaire before and after the activity which was distributed to the participants can be seen in the table below.

Based on the evaluation of community service activities, the results were known, namely the understanding of used cooking oil, the participants already knew what used cooking oil was. Another evaluation result that has increased is the danger of using cooking oil. Before this socialization activity, the participants a percentage of 15.39% did not all know the dangers of using cooking oil for health. After socialization about the dangers of using cooking oil, all participants (100%) knew about the dangers. In addition, regarding the use of used cooking oil for each frying pan, before and after this activity there was an increase, but not too significant. The participants preferred to keep using cooking oil because the price of cooking oil was relatively expensive. According to Martha et al (2022), cooking oil can still be used and has a moderate risk if used less than 3 times. The residents of Jabalsari Sumbergempol Tulungagung Village did not pay attention to the disposal of used cooking oil. It can be seen from the results of the evaluation that 92.3% still disposed of the waste indiscriminately and did not make use of it. After this activity, 100% of the participants chose to store and use it as a product.

**Table 1.** The results of the questionnaire before and after the activity

| No | Information                          | Answer before activity<br>(percentage) |             | Answer after activity<br>(percentage) |             |
|----|--------------------------------------|--|-------------|---------------------------------------|-------------|
|    |                                      | Knowing                                | Do not know | Knowing                               | Do not know |
| 1  | Definition of used oil               | 100                                    | 0           | 100                                   | 0           |
| 2  | Knowledge of the dangers of used oil | 84,61                                  | 15,39       | 100                                   | 0           |
| 3  | Use of any used oil Frying           | 88,46                                  | 11,54       | 3,85                                  | 96,15       |
| 4  | Throw away used oil after use        | 92,3                                   | 7,7         | 0                                     | 100         |
| 5  | Another benefit of used oil          | 0                                      | 100         | 100                                   | 0           |
| 6  | Used oil as a floor cleaner          | 0                                      | 100         | 100                                   | 0           |
| 7  | Used oil as a floor cleaner          | 0                                      | 100         | 100                                   | 0           |

The participants of this activity did not know about the other benefits of waste cooking oil. After direct practice of making products from used cooking oil, the participants came to know the other benefits. In addition, the participants can make their way of making products from used

cooking oil, namely floor-cleaning soap. The percentage related to the reuse and method of making used cooking oil as a floor cleaning soap (Figure 5) increased significantly, namely 100% each. After this activity, the participants were motivated to make products from used oil. So that it is expected to reduce cooking oil waste and this activity is really useful for increasing the skills of the participants. This service activity was closed with a group photo of the participants with the service team (Figure 6).



Figure 5. Cleaning soap from used cooking oil (Supermijel)



Figure 6. Group photo

### CONCLUSIONS AND RECOMMENDATIONS

The conclusion that can be drawn from this community service activity is that the residents of Jabalsari Sumbergempol Tulungagung Village know the impacts or dangers of using used cooking oil. In addition, the participants could make products from used cooking oil, namely floor-cleaning soap. This community service program is expected to have follow-ups every year in the village with other innovations. In addition, making floor cleaning soap from used cooking oil can be conveyed to other residents who have not had the opportunity to practice directly.

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