



Health and Safety-Oriented Fire Extinguisher Training Using Light Fire Extinguishers for Football Academy

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Abstract. Fires can happen to anyone, anytime and anywhere, including at soccer academies. Aji Santoso International Football Academy (ASIFA) is an international football academy that has quite a lot of facilities and infrastructure including dormitories, offices, kitchens, and gyms that have the potential for fire, but awareness of the importance of fire extinguishers is still minimal. Fires can cause material losses and even death. However, this impact can be minimized by prevention efforts through fire fighting training using a light fire extinguisher (LFE). The purpose of this activity is to conduct training and simulation of fire extinguishing using LFE to increase awareness and skills in the use of LFE in an effort to minimize the impact of fire. This activity was carried out on a total of 23 ASIFA community members, which were divided into back office staff, admin, teachers, kitchen workers and students. This activity includes counseling knowledge about the definition of fire, fires and fire protection systems. Using the community service method in the form of Participatory Learning and Action (PLA) in the form of observation, counseling, training and hands on practice carried out in the Aji Santoso International Football Academy area. The results of this counseling and training activity are very effective in increasing the knowledge and skills of the use of fire extinguishers. Judging from the results of the activity after being given material counseling, training and practical assistance, it can be stated that the Aji Santoso International Football Academy (ASIFA) community easily implements the material obtained by operating LFE properly and correctly. It is hoped that the results of this activity can increase the preparedness of the Aji Santoso International Football Academy (ASIFA) community in dealing with fires.

Keywords: fires, fire extinguishing, light fire extinguisher (APAR)

1. Introduction

Public awareness of fire safety is a very important aspect, especially in environments that have high fire hazard potential, such as, dense settlements, factories, schools, shop houses, forests [1]. From the available data, in 2023, Malang City experienced a 280 percent increase in fire disaster incidents, throughout 2023, there were around 210 events, while in 2022 there were only 75 events [2]. Extreme drought is still the highest cause of fires [3], however, other factors such as human negligence and the safety of electricity and furniture, this is evidenced by the data that in 2023 fire events on land were around 96 events, and the rest were fires in houses, shop houses, private buildings, factories and offices [4]. With the high number of fires, people should be aware and alert to this fire disaster, but the fact is the opposite, people are less aware of small things that can cause fires and when a fire has occurred, people are confused to extinguish, especially extinguishing with a Light Fire Extinguisher (APAR) [5]-[8].

Aji Santoso International Football Academy (ASIFA) is one of the sports academy institutions that has various facilities, including dormitories, offices, kitchens, and gyms. These facilities have the potential to experience fires. However, the level of awareness of the importance of using a Light Fire Extinguisher (APAR) among the ASIFA community is still relatively low and ASIFA facilities do not have a Light Fire Extinguisher (APAR), so efforts are needed to improve knowledge, skills, and procurement to support fire management [9], [10]. To overcome this problem, our service team conducted fire fighting training using LFE designed to improve the knowledge and skills of the ASIFA community, including staff and students. The training not only provides theoretical knowledge about fires, their causes, and prevention, but also includes practical demonstrations and hands-on exercises in the use of APAR. This activity was implemented using the Participatory Learning and Action (PLA) method, which involves the active participation of participants in the learning process, so that they can better understand and implement the knowledge gained [11]-[13].

With this training, it is hoped that the ASIFA community can use the Light Fire Extinguisher (APAR) correctly in order to be better prepared to deal with fire emergency situations and minimize the impact that may occur. In addition, this activity also aims to build a culture of safety within the academy, so that every individual has an awareness and responsibility for fire safety. Through this effort, we and ASIFA are committed to creating a safer environment for the entire community.

2. Method

Community service activities in the form of Community service activities in the form of training in the use of LFE were carried out in the area of the Aji Santoso International Football Academy (ASIFA) Gym Griya Shanta Blk. J, Mojolangu, Lowokwaru sub-district, Malang City, East Java in August 2024. This training activity on the use of LFE was carried out using the qualitative Participatory Learning and Action (PLA) method in the form of observation, counseling, training and hands-on practice

[14]. This Participatory Learning and Action (PLA) method is carried out with a focus on empowerment activities by involving participants in learning through counseling, training and practice (hand on) or real activities that are relevant to community empowerment material [15].

At the observation stage, the team identified the level of knowledge of the Aji Santoso International Football Academy (ASIFA) community towards fire hazards and fire extinguishers. The team also identified hazards in the Aji Santoso International Football Academy (ASIFA) environment ranging from school buildings, sports fields, gyms, halls, dormitories to kitchens. Furthermore, the team prepared an implementation schedule with the person in charge of Aji Santoso International Football Academy (ASIFA) to ensure that participants could participate in the activities without disrupting work, teaching and learning activities and training.

At the counseling stage, the team provided material about fire, the causes of fire, fire prevention and fire prevention using APAR. The purpose of this stage was to provide participants with theoretical knowledge on various aspects of fire. The next stage is the implementation of training which consists of a live demonstration of the stages of using APAR, so that participants can see firsthand the steps and process of handling fires using APAR. Finally, Hands On, so at this stage participants can take turns in the process of extinguishing artificial fires that have been prepared using APAR.

After all series of activities have been carried out, the team will provide equipment grants in the form of 5 pieces of LFE Powder (Dry) to partners as a form of care for the service team of the Faculty of Medicine, State University of Malang for the Aji Santoso International Football Academy (ASIFA) which can be used as an inventory in efforts to take the main steps in fire prevention. Furthermore, the team conducted an evaluation in the form of a report to the partner, in this case the Aji Santoso International Football Academy (ASIFA) as a partner. The report also contains a follow-up plan in the form of further inspections and periodic monitoring of fire extinguishers to ensure that the results of activities and grant inventory can be useful for partners. With this series of Participatory Learning and Action (PLA) methods, training activities on the use of fire extinguishers at the Aji Santoso International Football Academy (ASIFA) are carried out effectively, structured and sustainable.

3. Result and Discussion

During the observation phase to collect supporting data to address the problems at Aji Santoso International Football Academy (ASIFA), it was found that the lack of awareness of the ASIFA community towards fire disaster management was supported by the absence of a Light Fire Extinguisher (APAR). At the observation stage, the team identified the level of knowledge of the Aji Santoso International Football Academy (ASIFA) community towards fire hazards and fire extinguishers. It was found that the ASIFA community had very little knowledge about how to fight fires using fire extinguishers. There had never been any fire training before. The team also identified hazards in the Aji Santoso International Football Academy (ASIFA) environment ranging from school buildings, sports fields, gyms, halls, dormitories to kitchens. It was found that in all facilities and infrastructure owned by ASIFA, there are many parts that have a fire impact, such as kitchens that are not organised with safety, namely gas

cylinders without a safety mat that are at risk of fire. In addition, ASIFA also lacks fire prevention tools such as hydrants, fire extinguishers or gunny sacks. There are 2 3 Kg powder (dry) fire extinguishers owned by ASIFA but the expiry date is listed in 2020, even though the fire extinguisher should be maintained regularly [16]. This shows that special attention is needed so that protection in overcoming the risk of fire can increase [17]. Some of these problems are packaged and become material for team discussions to take the next step. Then the team prepared an implementation schedule with the person in charge of the Aji Santoso International Football Academy (ASIFA) to ensure that participants could take part in the activities without disrupting work, teaching and learning activities and training.

After determining the date and also further coordination, finally this community service activity in the form of training in the use of LFE was carried out on Friday 16 August 2024. Attended by 23 members of the Aji Santoso International Football Academy (ASIFA) community who were divided into back office staff, admin, teachers, kitchen workers and students. This activity lasted for approximately 2 hours in the gym yard of Aji Santoso International Football Academy (ASIFA).

The activity began with counselling on the importance of preparedness and preparedness for fire disasters and the introduction of Light Fire Extinguishers (APAR) and was attended by the entire ASIFA community including students, teachers, and staff who focused on understanding the use of APAR, with the hope that the ASIFA community could use LFE properly and correctly. In this counselling stage, the team provided material about fires, the causes of fires, fire prevention and fire prevention using fire extinguishers. The purpose of this stage is to provide theoretical knowledge to participants about various aspects of fire [18], [19]. This counselling went well as shown by the positive response from the participants. The method of delivering theoretical material delivered by the team was able to make participants take the initiative to ask questions about causal factors, how to overcome and tips and tricks in dealing with fires. In this process, information was obtained that there were several minor fire incidents that had been experienced by the ASIFA community but had not been good at handling them.

After the counselling, the next activity is the implementation of training on the use of fire extinguishers. This training began with demonstrations and simulations by our service team with guidance and explanations at each stage in the correct use of LFE as carried out in several previous trainings [20]-[22]. This demonstration is an effective method for participants to easily understand [23]. After the demonstration was completed, all participants were active in asking questions and expressing responses to the training process, followed by participants who re-demonstrated the use of a good and correct fire extinguisher. The service team provided corrections from the practice carried out by the participants in order to achieve the most correct step in using APAR. This process is carried out until all participants understand and can use LFE properly and correctly.

After all the training series had been carried out, the team then handed over the grant to ASIFA in the form of 5 new Dry Powder fire extinguishers. The grant was given as a form of concern for the service team of the Faculty of Medicine, State University of Malang in supporting the fulfilment of occupational safety and health tools. With the

existence of safety facilities in an agency, it can improve the quality of the agency's security [24].

Overall, this training activity on the use of LFE received a positive response from the participants, where the participants responded very well and enthusiastically and were able to implement the counselling and training well, seen from the re-demonstration carried out by the participants, it can be seen that the participants were able to understand how to use LFE properly and correctly. In addition, the grant from our service team to ASIFA in the form of 5 fire extinguishers shows that we and ASIFA are committed to making the environment in ASIFA facilities supportive of fire disaster response and readiness. Through this activity, by providing knowledge and skills in the use of fire extinguishers and fire disaster preparedness, it is hoped that it can gradually make our environment, especially the ASIFA environment, more aware, responsive, and alert to fire disasters and can be an example for other environments to be more vigilant and address this properly, which in turn will reduce the impact if a fire occurs or can even reduce the number of fires in Indonesia, especially in Malang City.

4. Conclusion

Overall, the implementation of this community service activity provides a clear picture of the level of knowledge of the Aji Santoso International Football Academy (ASIFA) community towards fire hazards and fire management using APAR. With this training, it can increase the preparedness of the Aji Santoso International Football Academy (ASIFA) community to overcome and minimise the risk of fire. Continuous monitoring and inspection of fire extinguisher equipment is also very important to ensure that the equipment is properly maintained. It is hoped that the results of this training activity can benefit the Aji Santoso International Football Academy (ASIFA) community.

5. Recommendation

To provide development and improvement for further community service activities, there are several notes and recommendations as follows:

- Lack of awareness of the importance of fire risk reduction efforts using LFE so that training needs to be given to the entire Aji Santoso International Football Academy (ASIFA) community.
- Fire suppression tools other than fire extinguishers should be prepared, such as gunny sacks or hydrants to improve the protection system in an effort to reduce the risk of hazards at Aji Santoso International Football Academy (ASIFA).
- It is necessary to inspect and maintain the fire extinguisher, namely at least once every 6 months checking the pressure on the fire extinguisher [25].

6. Conflict of Interest

The author(s) declared no conflict of interest.

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