


Efforts To Improve Public Awareness Of Occupational Safety And Health (K3) In The Plantation Sector: A Case Study Of Melon Plantations In Lamongan

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Article Info	ABSTRACT
Keywords: Efforts Public Awareness Occupational Safety and Health (K3) Plantation Sector Melon Plantations	Occupational Safety and Health (OHS) is an important aspect that must be implemented in the plantation sector which has a high risk of accidents, including in melon plantations in Lamongan Regency. This study aims to increase awareness and understanding of farmers and workers regarding the implementation of OHS through a community service program with a qualitative approach based on case studies. The activities were carried out in two stages, namely preparation and implementation, which involved collecting information about working conditions and training in the form of socialization, interactive discussions, demonstrations of the use of personal protective equipment (PPE), and direct practice in the field. The results showed a significant increase in participants' understanding and awareness of the importance of OHS, which was reflected in their enthusiasm in participating in the activities and their commitment to implementing OHS standards. Support from the village government and community leaders strengthened the sustainability of this program. This study concluded that a participatory approach with case studies was effective in increasing OHS awareness in the plantation sector and could be replicated in other agricultural sectors.
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INTRODUCTION

Occupational Safety and Health (K3) is a critical aspect that must be implemented across all types of work to protect workers from the risks of illness, accidents, and work-related losses. K3 is defined as the protection provided to workers to ensure they can work safely (Simbolon & Nuridin, 2017). According to Tagueha et al. (2018), the primary goal of K3 is to enhance the physical, mental, and social well-being of workers, prevent health issues caused by work, and adapt work to the workers' conditions. Additionally, K3 guarantees the physical and mental safety of workers, thereby improving their welfare (Simamarta et al., 2022). In this context, a safe working environment is essential for optimizing human resource efficiency (Prabowo et al., 2018).

K3 aspects include physical, biological, and psychological hazards. Physical hazards involve workplace conditions that may cause accidents or occupational diseases, such as vibration, radiation, and noise (Caparrós et al., 2020). Caparrós et al. (2020) emphasize that physical hazards can be reduced through systematic risk management and the adoption of safer technologies. Biological hazards are related to work environment factors that impact worker health, such as exposure to fungal or bacterial infections, which are common in the agricultural sector (Ammad et al., 2021). Psychological hazards pertain to individual personality conditions or attitudes that affect workers' psychological well-being, including excessive work stress or dissatisfaction with the work environment (Winarsunu, 2008). Dwi (2018) also pointed out that leadership's attention to employees' problems plays a crucial role in reducing psychological hazards at the workplace.

Factors influencing K3 can be categorized into human, mechanical, natural, and management factors. Human factors include worker negligence during tasks, which often leads to accidents (Tanjung et al., 2022). This negligence may involve improper use of personal protective equipment (PPE) or failure to follow established safety procedures. Mechanical factors relate to the use of work equipment, which must match the workers' capabilities to prevent accidents. The use of outdated or unsuitable equipment can increase the risk of injuries (Nuraliza et al., 2023). Natural factors involve unpredictable events such as natural disasters, which can affect work safety. For example, extreme weather in the agricultural sector can pose risks like slipping on wet terrain or damage to heavy machinery due to flooding (Nair, 2023). Furthermore, management factors involve the implementation of effective K3 policies, such as providing PPE, conducting regular training, and closely supervising work procedures.

Zaini et al. (2022) further noted that other factors like physical, chemical, biological, ergonomic, psychosocial, mechanical, electrical, and waste-related hazards also contribute to occupational safety risks. In the melon plantation sector, workers are frequently exposed to chemical pesticides, which can harm their health if not handled properly. Ergonomic hazards are another concern, especially regarding improper working postures during melon harvesting, which may lead to musculoskeletal disorders.

Effective K3 implementation requires a multidisciplinary approach. Research by Caparrós et al. (2020) demonstrates that using advanced technology to detect and mitigate physical hazards significantly reduces work accidents. Ammad et al. (2021) emphasize the importance of regular training to raise awareness of biological risks in the workplace. Regarding work psychology, leaders' attention to employee welfare fosters a supportive work environment, which ultimately enhances productivity and job satisfaction (Dwi, 2018).

In Lamongan Regency, the implementation of K3 is highly relevant to the melon plantation sector. As a rapidly growing agricultural industry, melon plantations make a significant contribution to the local economy. However, activities in this sector, such as planting, maintenance, and harvesting, involve strenuous physical labor and the use of agricultural equipment that presents a high risk of accidents (Gestama, 2020). K3 efforts aim to protect workers from accidents and occupational diseases through various procedures and equipment designed to reduce or eliminate work risks (Gestama, 2020).

Factors causing work accidents in the plantation sector, such as human error, unsafe working environments, and equipment failure, require significant attention (Riadi, 2021). Risks such as injuries from sharp tools, exposure to pesticides, and health issues caused by poor working postures are the primary concerns that need to be addressed (Khadijah & Susilawati, 2024). Tackling these problems requires a comprehensive strategy, including raising public awareness of the importance of K3 through socialization and providing PPE (Saleh et al., 2024).

The purpose of this socialization is to educate workers and the community on the importance of K3 and practical steps for implementing it in the field. Occupational safety standards include four main components: hazard identification, risk assessment, risk control, and risk evaluation (Ari et al., 2025). Implementing these procedures is expected to reduce work accidents, particularly by ensuring the proper use of PPE. Data from the Social Security Administering Agency (BPJS) for Employment reveals a continual increase in work accidents in the agricultural sector each year (Suheri Jumartika et al., 2021). Most of these accidents result from a lack of awareness and discipline in using PPE, with 66% of workers reporting physical injuries due to improper PPE use (Suheri Jumartika et al., 2021).

In addition to physical health impacts, the success of K3 implementation also affects workers' mental well-being and productivity (Permatasari, 2023). When workers feel safe and protected, they tend to work more efficiently and with greater enthusiasm (Purwoko, 2022). Therefore, efforts to enhance public awareness of the importance of K3 through education and the provision of adequate safety facilities are expected to create a safer work environment in the melon plantation sector in Lamongan.

This study aims to identify the main challenges faced by the community in implementing K3 in the melon plantation sector and to develop strategic measures that can be taken to increase K3 awareness and implementation in the work environment. Through a deep understanding of community conditions, challenges faced, and the effectiveness of interventions, this program is expected to serve as a model that can be replicated in other agricultural sectors.

METHODS

The methodology for implementing the community service activities in this study involves two main stages: the preparation stage and the implementation stage. This approach aims to raise awareness about the significance of Occupational Safety and Health (K3) in the plantation sector, particularly in the melon plantations of Lamongan. The study adopts a qualitative methodology with a case study approach, which enables researchers to gain an in-depth understanding of the phenomenon (Yin, 2018). The case study was chosen to explore the specific conditions of the melon plantation community, the challenges they encounter, and the effectiveness of the K3 program interventions.

During the preparation phase, information and issues were gathered from the Lamongan plantation community through structured interviews to identify their specific needs and challenges (Creswell & Poth, 2018). This information includes details about work conditions, the community's understanding of K3, and their need for relevant training

materials. The collected data serves as a foundation for designing training materials tailored to the community's needs. This phase involves both technical and non-technical design processes. The technical design focuses on developing training materials, providing necessary facilities, and preparing effective training methods. On the other hand, non-technical design includes coordinating with partners, gathering supporting data, and analyzing needs to ensure the smooth and sustainable execution of the training program. The preparation phase also includes organizing logistics, creating training schedules, and assigning tasks to the implementation team.

The implementation phase follows the completion of preparations, ensuring all technical and non-technical needs are met. The activities commence with delivering material on basic K3 principles related to plantation work. The training utilizes a lecture method to provide theoretical understanding, followed by interactive discussions to address specific problems faced by the farmers, in alignment with participatory learning principles (Freire, 2000). Additionally, demonstrations on the use of personal protective equipment (PPE) are conducted to offer practical insights into applying K3 in the field. The goal of the training is to enhance participants' understanding of K3's importance, especially concerning the safe use of agricultural tools, pesticide management, and handling other work-related risks.

The community service activities in Lamongan follow a structured training schedule. In the first session, participants receive an introductory lecture on K3 in the plantation sector. Subsequent sessions teach participants how to implement K3 principles in their daily plantation tasks, including proper PPE use and safe work practices, through a combination of lectures and hands-on practice. Case studies integrated into the program enable researchers to directly observe shifts in participants' understanding and behavior during the training. Furthermore, this approach provides valuable insights into the program's effectiveness in addressing specific local challenges.

It is anticipated that by the end of the training, participants will have a clear understanding of the importance of K3 in plantation activities and will be able to apply K3 principles to foster a safer and more productive work environment. The use of qualitative methodology and case studies also facilitates direct feedback from participants, which will be used to assess and improve the program in the future.

RESULTS AND DISCUSSION

Community service activities conducted in the melon plantations of Lamongan included a series of interventions aimed at increasing the community's understanding of the significance of Occupational Safety and Health (K3). The following key findings were identified through interviews and field observations.

Initial Understanding of K3

The interview results revealed that most participants had a limited understanding of the importance of K3 in plantation activities. One farmer, Mr. S., shared: *"So far, we have been working as best we can, only knowing how to produce good melons, but never thinking about using personal protective equipment."* (Farmer). This statement indicates that awareness of potential work hazards, such as exposure to chemicals or the risk of physical injuries, was still

low. This sentiment was also expressed by a head of a farmer group, who remarked: *"When it comes to safety, we often think it's not necessary as long as the job gets done."* (Head of Farmer Group). The analysis of these interviews suggests that the limited understanding of K3 is primarily due to a lack of prior education and insufficient access to information related to occupational safety.

Challenges in Implementing K3

The interviews revealed several challenges faced by the community in implementing K3, including economic constraints, the lack of access to personal protective equipment (PPE), and ingrained work habits that are inconsistent with K3 principles. One participant, Mrs. L, shared: *"We want to wear gloves or masks, but often they are hard to come by or expensive."* (Housewife) Additionally, habitual work practices posed a significant obstacle. Another farmer explained: *"We've been used to working like this for a long time, so it's hard to change habits."* (Senior Farmer). These challenges highlight the importance of external support, particularly in the form of affordable PPE and continuous education to shift the community's mindset and work practices.

Impact of K3 Training

Following the training, participants exhibited a heightened awareness of the significance of K3 in their work. Mrs. R., a young farmer, shared: *"After learning about the dangers of pesticides and how to use them safely, now I always wear a mask and gloves when working."* (Young Farmer). Similarly, the Head of Lamongan Village, Mr. Y., commented: *"This program has opened the minds of our community. Before, they didn't know the importance of safety, but now things are starting to change."* (Village Head). The active involvement in discussions and hands-on practice during the training played a crucial role in the success of the activity. The majority of participants reported feeling more confident in implementing K3 procedures, indicating the positive impact of the program on both their knowledge and practical skills.

Sustainability Initiatives

This program not only provided education but also inspired the community to implement sustainability initiatives. One such initiative was the collective purchase of PPE to reduce costs. Mr. M., a participating farmer, explained: *"We plan to buy PPE together, so it's cheaper and everyone can use it."* (Initiator Farmer). Support from the village government is seen as a vital resource for expanding similar programs to other regions. The Head of Lamongan Village emphasized: *"We will try to make this program an example for other villages, because the results are very positive."* (Village Head). This initiative highlights the community's commitment to continuing the program's benefits and ensuring its lasting impact.

Evaluation and Recommendations

The evaluation results indicated that 90% of participants reported a better understanding of the importance of K3, 85% expressed their intention to use PPE consistently, and 75% showed interest in further training. Despite these positive outcomes, several challenges remain, particularly concerning economic constraints and the limited availability of personal protective equipment.

One key recommendation is to establish partnerships with the private sector to provide PPE at more affordable prices, making it more accessible to the community. Additionally, developing digital training modules could help reach a wider audience, ensuring that more plantation workers benefit from this educational program. In conclusion, the community-based training has significantly contributed to enhancing awareness and understanding of K3 in the melon plantation sector in Lamongan, and with continuous support and expansion, its positive impact can be sustained.

CONCLUSION

The community service activities conducted on melon plantations in Lamongan successfully increased awareness and understanding of Occupational Safety and Health (K3) among farmers and workers. Through a series of activities, including socialization, interactive discussions, demonstrations of personal protective equipment (PPE) usage, and hands-on practice, participants showed a high level of enthusiasm in engaging with the materials and striving to implement safety standards in their work. The support from the village government, community leaders, and heads of farmer groups was crucial in strengthening the success of the program and in laying the foundation for the sustainability of K3 practices in the future. The active involvement of participants and their commitment to applying the knowledge gained reflect a significant increase in both awareness and adherence to K3 principles in the melon plantation sector. To ensure the continued improvement of K3 practices, melon plantations should enhance education and training on K3 implementation, provide adequate personal protective equipment (PPE) facilities, and regularly monitor and evaluate K3 adherence on the plantations. Furthermore, establishing partnerships with relevant institutions can foster greater compliance and understanding among workers. For future research, it is recommended to focus on the long-term impact of K3 training on both productivity and work safety. Expanding the scope of research to include additional plantation locations or types can provide broader insights. Exploring technology-based training methods could also improve the effectiveness of K3 education, making it more accessible and impactful for workers in the agricultural sector.

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