



## **Safety Behavior Model in Reducing Accidents in Maintaining the Sustainability of the Madura Tourism Industry**

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### **INFO ARTIKEL**

### **Abstract**

#### *Keywords:*

*Safety behavior model,  
safety knowledge, accident,  
sustainability*

The tourism industry is a key player in the global economy, generating billions of dollars in revenue and providing jobs for millions of people around the world, contributing more than \$6 trillion annually, employing more than 250 million people, and generating 7% of global GDP (World Travel & Tourism Council, 2018). However, as the industry grows, comes the responsibility to ensure the safety and well-being of employees and tourist visitors. Safety is critical in maintaining the reputation and sustainability of the tourism industry, while employee safety is critical in ensuring a productive and positive work environment. This research focuses on the impact of safety knowledge and safety behavior in the tourism industry so that it has an impact on reducing the number of accidents. This research uses a quantitative research approach by distributing questionnaires to LON Malang tourism managers (BUMDesa administrators, POKDARWIS, tourism employees/workers, village officials and economic workers around the tourism area). The findings of this research are that knowledge contributes positively and significantly to reducing the number of work accidents, safety behavior contributes positively to reducing the number of accidents, and safety behavior mediates the relationship between knowledge and work accidents

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## Introduction

Occupational health and safety (K3) is a form of effort to create a safe, healthy workplace, free from environmental pollution, so that it can protect and be free from work accidents, ultimately increasing work efficiency and productivity. Work accidents can cause economic and non-economic losses due to workers' lack of awareness of implementing safe behavior while working. Apart from that, work accidents not only cause fatalities but also material losses for workers and employers, but can disrupt activities as a whole, damage the environment which will ultimately have an impact on the wider community. (Irzal, 2016)

Unsafe work behavior (unsafe acts) and unsafe workplace conditions (unsafe conditions) are the main factors that can cause work accidents. There is a prediction which states that unsafe behavior (unsafe act) is the most important factor in work accidents with a percentage of 88%, followed by an unsafe workplace environment (unsafe condition) at 10% and the rest is caused by unexpected and unpredictable things. avoided by 2% (Isnaini et al., 2016).

Incorrect actions at work that are not in accordance with what has been determined (human error) usually occur due to physical imbalances in the workforce and lack of education. As for those caused by poor working environmental conditions or dangerous work equipment conditions, these are usually influenced by things such as tools that are not suitable for use, safety equipment that does not meet standards. These two things explain that human behavior is the main cause of accidents in the workplace. (Irzal, 2016)

This also applies to the tourism sector, where the tourism sector is also not free from unsafe behavioral practices, especially those related to occupational safety and health. The tourism industry has a high risk of accidents, such as fires, natural disasters and other incidents. Therefore, safety is one of the main factors that needs to be considered in the tourism industry. Safety behavior is behavior that promotes safety and prevents

accidents in the workplace. To develop an effective program in improving safety behavior, good knowledge is needed by workers, adequate organizational support so that accidents can be avoided.

This research has the following objectives: Improve safety practices; reduce the risk of accidents; and creating a safer tourism future for the tourism industry, Providing insights to tourism managers that can help improve safety practices and ensure a positive and safe experience for tourists visiting the destination, Designing safety behavior prototypes to reduce the number of work accidents in the tourism industry.

## **Literature review**

### **Work accident**

Work accidents are accidents that occur in the workplace while carrying out work. An accident is an undesirable and unexpected event that can cause human and/or property casualties. Meanwhile, a workplace is a closed or open, movable or fixed room or field where workers work, or which workers frequently enter for the purposes of a business and where there are sources of danger (Permenaker, 1998).

M. Sulaksmono in Ahmad (2012) is an unexpected and unwanted event that disrupts the process of an activity that has been regulated. Work-related accidents are related to work relations at the company. Work relationship here can mean that the accident occurred due to work or while work was taking place. Frank Bird Jr, is an undesirable event that occurs and causes loss to people and property. There are three types of accident rates based on the effects they cause (Ahmad Reza Ramdani, 2013: 13)

### **Safety Behavior**

According to Heinrich et al (1980: 34) safety behavior is a symptom of good management policies, good control over work, sufficient knowledge of work, correct assessment of existing dangers, or other personal factors.

Safety behavior according to Bird and Germain (in Pratiwi and Hidayat, 2014: 183) is behavior that can cause accidents or incidents. Zhou and Jiang (2015: 5015) in their research explain that employee safety behavior is a response from employees to management regarding safety efforts carried out by the company.

Safety behavior for employees can be interpreted as safe behavior at work such as using correct and appropriate PPE, operating machines in accordance with SOP (Standard Operational Procedure) and also the company's quality targets, apart from that, employees must also behave safely in accordance with what they have received in training. from the company so far. All of this is done so that employees can work safely and comfortably. The key to success in the safety behavior process is that there is good cooperation to implement program planning and the participation of each employee on the team.

### **Safety Knowledge**

Safety behavior is determined by safety knowledge and the ability to perform specific tasks (Griffin and Neal, 2000), and safety knowledge helps motivate individuals in these behaviors in their environment. Knowledge plays a central role in an individual's intention to behave (Vierendeels et al., 2018); Safety knowledge leads to safe behavior. In addition, Neal and Griffin (2002) also showed that safety knowledge showed a positive impact on safety behavior in their model (Dellaa, 2020).

Safety behavior is a matter of individual interest in an effort to minimize or prevent accidents. Behavioral aspects of safety culture can be examined through peer observation, self-report measures and/or outcome measures (Cooper, 2000).

The concept of safety behavior is a systematic application of psychological research on human behavior in terms of workplace safety. Safety behavior emphasizes aspects of human behavior related to work accidents. Employee safety behavior requires feedback from employees to

management regarding the safety efforts provided by the company (Zhou and Jiang, 2015) and safety behavior is driven by the individual's knowledge, ability and motivation to carry out this behavior (Griffin and Neal, 2000). Thus, safety behavior can be interpreted as individual actions to follow the company's standard operational procedures to prevent work accidents, and maintain a comfortable work environment by complying with company safety regulations.

The data collection technique used was a method using self-administered surveys by distributing questionnaires directly to respondents and filled in by the respondents themselves (Cooper & Schindler, 2014). The questionnaire is used to measure the construct being analyzed, namely safety knowledge, safety behavior and accidents. The questionnaires in this research were distributed to respondents directly to increase the level of response or assessment regarding the variables studied.

Data collected from the questionnaire was tabulated, then processed using the Path Analysis model. Path Analysis is used to analyze relationship patterns between variables with the aim of determining the direct or indirect influence of a set of independent/exogenous variables on the dependent/endogenous variable (Sani and Maharani 2013:74).

## **Observed/Measured Variables**

### **Accident (Y)**

Undesirable events occur and cause loss to people and property. There are three types of accident rates based on the effects they cause (Ahmad Reza Ramdani, 2013: 13). Injuries are assessed with 11 items based on the Workers' Compensation Board Database that outlines the nature of the injury suffered (Natalie C, 2015).

### **Safety Behavior (Z)**

Determined by the knowledge and ability for certain behavior, and the individual's motivation to carry out that behavior (Neal et al, 2000: 101). Safety behavior can be divided into 2 types, namely compliance and participation in safety. Safety compliance includes the behavior of following safety procedures and carrying out work in a safe manner. Meanwhile, participation in safety includes helping coworkers, promoting safety programs in the workplace, and trying to improve safety in the workplace (Neal et al, 2000: 101).

### **Safety Knowledge (X)**

Zid, C., et all (2018) is the knowledge required in terms of safety rules and procedures, use of safety equipment; identification of related hazards, concept of unsafe condition behavior, accidents.

## **RESULT**

Contains the results of empirical research or theoretical studies written in a systematic, critical, and informative manner. The use of tables, figures, etc. is only as support to clarify the discussion and is limited to truly substantial support, for example tables of statistical test results, pictures of model test results, etc. The table presented is not in the form of statistically processed output, but is an informative summary of the results. Figures and Tables are placed consistently in the middle of the page, numbered and titled at the top for Tables and at the bottom for Figures. Each table or figure must be cited or explained. Explanation of the table is not just repeating the numbers in the table.

**Tabel 1. Uji T**  
**MODEL 1 (untuk mengukur X ke Z)**  
 Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	14.267	3.662		3.896	.000
Safety Knowledge	.371	.058	.644	6.407	.000

a. Dependent Variable: Safety Behavior

Mengacu pada output regresi model 1 diketahui bahwa nilai signifikansi variabel safety knowledge adalah  $0,000 < 0,05$ . Hasil ini memberi kesimpulan bahwa regresi model 1 yakni safety knowledge (X) berpengaruh positif terhadap safety behavior (Z).

**Tabel 2. Uji T**  
**MODEL 2 (untuk mengukur X ke Y dan Z ke Y)**  
 Coefficients<sup>a</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	9.237	3.709		2.491	.016
1 Safety Knowledge	.290	.068	.509	4.258	.000
Safety Behavior	.280	.118	.283	2.366	.021

a. Dependent Variable: Kecelakaan Kerja

## **DISCUSSION**

### **Safety knowledge influences work accidents**

Based on the t test, the significant value of the safety knowledge variable (X) on the work accident variable (Y) was 0.000 < significant 0.05. So it can be concluded that safety knowledge has a positive and significant influence on reducing work accidents. This means that the better the level of safety knowledge in LON Malang tourism, the lower the number of work accidents. This research is in accordance with research conducted by Rahman et al (2023) in their research which also stated that safety knowledge has a negative and significant effect on work accidents. So managers must pay more attention to the knowledge of their employees, so that this will help management in minimizing the occurrence of work accidents.

As for the results of observations made during the research, it can be seen that the respondents' responses said "agree". This means that safety knowledge in preventing work accidents in tourism can be said to be good. In the indicator with the statement "Management has implemented and created a good safety system" with a percentage of 48.3%. Employees feel that management has created a good work environment. Employees also feel safe and comfortable with the knowledge provided by the management, this is proven by the results of the respondents' answers to the statement icon "Every employee is given the opportunity to report every work accident and risk experienced." 32 respondents who answered in the affirmative or 53.3%, Those who answered strongly agreed were 24 people or 40%. So from these results it can be concluded that managers in general have given employees the opportunity to report any work accidents and risks they experience.



### **Safety knowledge influences safety behavior**

Based on the t test, the significant value of the safety knowledge variable (X) on the safety behavior variable (Z) was  $0.000 < \text{significant } 0.05$ . So it can be concluded that safety knowledge has a positive and significant influence on safety behavior. This means that safety knowledge on LON Malang tourism can shape the safety behavior of its employees.

This research is in accordance with research conducted by Ilsya Putri et al (2021) in their research who also stated that safety knowledge has a positive and significant effect on safety behavior. So the better the knowledge available at LON Malang, the better it will be to build safe behavior for existing employees. As for the results of observations made during the research, it can be seen that the respondents' responses said "agree". This means that safety knowledge in forming employee safety behavior at LON Malang can be said to be good. In the indicator with the statement "Management encourages employees to participate in decision making that has an impact on safety" with a percentage of 65%. Employees are also actively involved in the LON Malang tourism environment by promoting safety programs, this is proven by the results of respondents' answers to the statement icon "I help promote safety programs in the workplace", 41 respondents who answered agree or 68.3%, which 12 people or 20% answered strongly agree.

### **Safety behavior influences work accidents**

Based on the T test, the significant value of the safety behavior variable (Z) on the work accident variable (Y) was  $0.021 < \text{significant } 0.05$ . So it can be concluded that safety behavior has a positive and significant influence on work accidents. This means that safety behavior on LON Malang tourism can reduce the number of work accidents. This research is in accordance with research conducted by Rahman et al (2023) in their research which also stated that safety behavior has a positive and significant effect on work accidents. So managers must pay more attention to the

formation of employee safety behavior, so that this will help minimize the occurrence of work accidents.

As for the results of observations made during the research, it can be seen that the respondents' responses said "agree". This means that employee safety behavior in minimizing work accidents at LON Malang can be said to be good. In the indicator with the statement "I always follow the work procedures set by the management" with a percentage of 58.3%. This means that the level of employee safety behavior is high, and will later help to prevent work accidents. LON Malang employees also always carry out their work by always using PPE to maintain safety, this is proven by the results of respondents' answers to the statement "I use PPE in the work area according to applicable standards" 39 respondents who answered agree or 65%, who answered strongly 18 people or 30% agreed. So from these results it can be concluded that employees in general have implemented and followed existing safety guidelines by always using PPE according to established standards. So, by complying with safety guidelines, it is hoped that work accidents will be able to be prevented.

### **Safety knowledge influences work accidents through safety behavior**

Based on the t test, the significant value of the safety knowledge variable (X) on the work accident variable (Y) through safety behavior (Z) was 0.000 < significant 0.05. So it can be concluded that safety knowledge has a positive and significant influence on work accidents through safety behavior. This means that safety behavior at the LON Malang company can reduce the number of work accidents. This research is in accordance with research conducted by Setiawan et al (2014) in their research which also states that safety knowledge has a positive and significant effect on work accident discipline with safety behavior as an intervening variable. So managers must pay more attention to safety knowledge in the company

environment which will later become a driving force for the formation of good employee safety behavior so that it can prevent work accidents at LON Malang.

As for the results of observations made during the research, it can be seen that the respondents' responses said "agree". This means that the safety climate at LON Malang which will encourage the formation of safety behavior can be said to be good. In the indicator with the statement "I always carry out existing safety regulations" with a percentage of 48.3%. This means that the regulations which are part of the company's safety climate indicators can be implemented by employees, so that employee safety behavior can be formed and will act as an intermediary in preventing work accidents.

Tourism village destination managers, both BUMDes and Pokdarwis, are one component in society that has an important role and contribution in developing tourism in the village. The existence of this institution as a local institution consists of tourism actors who have concern and responsibility for ensuring the implementation of tourism villages. Becoming a group that operates independently, working together with the community (including youth organizations) to develop tourism based on the local potential and creativity of each village. In various villages, Pokdarwis and BUMDEs have proven to have a significant influence in improving the quality of village attraction programs and creating a sense of belonging in local communities towards the progress of tourism in their villages. This description emphasizes that the Institute is an independent, local organization based in a village whose members are relatively young.

Based on the results of surveys and interviews with administrators and members of BUMDes and POKDARWIS in Kab. Sampang can be described in general regarding their educational background, age, motivation, experience, abilities, talents and expertise as follows

## CONCLUSION

Based on the results of the discussion and conclusions in this research, the suggestions that can be made are as follows. 1. Of all the statement items in the safety knowledge variable, the statement "Management ensures that everyone receives the necessary information related to safety" shows the highest percentage who disagree. So this shows that the information related to safety provided by management is still not optimal. In this regard, management should conduct outreach in the form of posters/other visual aids directly to employees. So that employees can really get maximum information related to safety. 2. Of all the statement items in the safety behavior variable, the statement "I operate tools or machines with safety equipment on good machines" shows the smallest percentage who strongly disagree. So it is necessary for employees to always operate equipment in a safe manner assisted by supervision from management so that it will encourage the formation of employee safety behavior in the work environment, and will be a determinant in preventing work accidents.

Continuity 1. In the future, we can add or develop other variables such as safety awareness and safety climate, which can reduce the occurrence of work accidents from employee awareness and a safe and comfortable work environment. 2. It is hoped that a wider sample will be used and the respondents will also be travel agents, local home stays and tourist visitors in Madura.

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