



## **THE RELATIONSHIP LEVEL OF EMPLOYEE KNOWLEDGE ABOUT LIGHT FIRE EXTINGUISHER (APAR) WITH THE BEHAVIOR OF USE OF APAR**

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### **ABSTRACT**

One of the biggest accident problems in the world is the problem of fire, fires occur due to factors that cause fires. Causes of fires are generally classified into two groups, namely Human Factors (Unsafe Acts) and Technical Factors (Unsafe Conditions). According to research by the National Association of Fire Equipment Distributors in the United States in 2002 that a total of 5,400 cases of fire can be overcome and extinguished using a Light Fire Extinguisher (APAR), while the rest are extinguished with automatic water spraying equipment or from fire extinguishers with larger equipment. The purpose of this study was to determine the relationship between the level of employee knowledge about light fire extinguishers and the use of fire extinguishers. This type of research uses a descriptive quantitative analytic method with a cross sectional approach. The population and sample in this study amounted to 23 respondents using the Total Sampling technique. The instrument used is a questionnaire sheet regarding employee knowledge about light fire extinguishers and behavior in using APAR. Data analysis using univariate and bivariate with Chi-Square test. The results of the univariate analysis for the employee knowledge variable about light fire extinguishers from 33 respondents who had good knowledge were 13 employees (39.4%), respondents who had sufficient knowledge were 10 employees (30.3%) and respondents who had less knowledge were 10 employees (30.3%).

**Keywords: Knowledge, Light Fire Extinguisher, Behavior, Use of APAR**

### **INTRODUCTION**

Awareness about Occupational Safety and Health is needed, the risk of work accidents can occur at any time. Law No. 1/1970 and No. 23/1992 regulates Occupational Safety and Health. Of course no worker wants work accidents to occur, but the risk of work accidents can happen anytime and anywhere. Therefore Occupational Safety and Health or K3 is one of the government regulations that guarantees our safety and health at work.

Occupational Health and Safety is a situation in a healthy and safe job, the work being carried out, the company and also for the community and the environment around the factory or workplace. Occupational safety and health is also an effort to prevent undesirable things from happening that result in work accidents. The laws governing K3 are as follows: Law no. 1 of 1970 concerning Occupational Safety, this law clearly regulates the obligations of workplace leaders and workers in carrying out work safety and Law number 23 of 1992 concerning Health, this law states that specifically companies are obliged to check the health of the body, the mental condition and physical abilities of workers who are new or who will be transferred to a new workplace, in accordance with the nature of the work assigned to workers, as well as periodic medical examinations. On the other hand, workers are also obliged to use personal protective equipment (PPE) appropriately and correctly and comply with all required occupational safety and health requirements. Law number 23 of 1992, article 23 concerning Occupational Health also emphasizes the importance of occupational health so that every worker can work healthily without endangering himself and the surrounding community so that optimal work productivity is obtained. Therefore, occupational health includes occupational health services, prevention of occupational diseases and occupational health requirements. 1 in



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One of the biggest accident problems in the world is the problem of fire, fires occur due to factors that cause fires. Causes of fires are generally classified into two groups, namely Human Factors (Unsafe Acts) and Technical Factors (Unsafe Conditions). Hazard sources can be eliminated through hazard identification and control. In the event of a fire incident, the weakest is the control system by humans as managers or occupants of the building (Suprpto, 1982). We encounter many discrepancies about APARs both in the way they are used, placed, inspected and how to maintain APARs. This had an impact on the failure of the fire extinguishing process at the start of the incident, causing a fire. The cause of the discrepancy is the result of ignorance of the employees.

According to research by the National Association of Fire Equipment Distributors in the United States in 2002 that a total of 5,400 cases of fire can be overcome and extinguished using a Light Fire Extinguisher (APAR), while the rest are extinguished with automatic water spraying equipment or from fire extinguishers with larger equipment. . In the same survey it was also explained that more



than 90% of fire cases could be handled using APAR, in many cases fires could be extinguished using APAR before the fire department arrived. An incident related to an APAR has also occurred at Biscuit Manufacturing UK, a carbon dioxide type APAR that was in the room suddenly exploded and destroyed a computer, there were no fatalities in this incident, the incident was allegedly caused by a crack in the valve of the fire extinguisher (Dalton, 2005). Based on the Australian Competition & Consumer Commission (ACCC) explains several failures of the APAR function which resulted in fires in Australia, as follows: a fire that occurred in a house in the Hobart area was due to an APAR that was not functioning properly and a fire that occurred in a business area Hobart in 1997 because the dry chemical powder type fire extinguisher failed to operate. 2 a fire that occurred in a house in the Hobart area was due to an APAR that was not functioning properly and a fire that occurred in the Hobart business area in 1997 was due to an APAR with a dry chemical powder type failing to operate. 2 a fire that occurred in a house in the Hobart area was due to an APAR that was not functioning properly and a fire that occurred in the Hobart business area in 1997 was due to an APAR with a dry chemical powder type failing to operate. 2

Based on data from the National Disaster Management Agency (BNPB) there were 979 cases of fire consisting of 978 cases of fire in residential areas and 1 case of fire in a hospital that occurred in Indonesia from 2011-2015. From a total of 979 fire cases, there were 4 fire cases that occurred in Yogyakarta during 2012-2013. From these data it is known that most fire incidents occur in residential areas, but we must remain vigilant because hospitals are always in densely populated residential areas (BNPB, 2016). while data from BPBD Yogyakarta city which was obtained through interviews with the Manager of the Center for Disaster Management Operations Control Center (Pusdalops-PB) the incidence of fires that occurred within the last five years has increased. The total number of fire incidents that occurred from 2011-2016 was 125 fire incidents. Most of the fires that occurred were caused by an electrical short in one of the residents' houses which is a residential area. Like the case of the fire that recently occurred at the Mintoharjo Naval Hospital, the fire occurred in a high-pressure air chamber which triggered an explosion in the chamber tube, killing 4 patients who were undergoing the hyperbaric oxygen therapy process in that room. 3 a fire occurred in a high-pressure air chamber which triggered an explosion in the chamber tube, killing 4 patients who were undergoing a hyperbaric oxygen therapy process in the chamber. 3 a fire occurred in a high-pressure air chamber which triggered an explosion in the chamber tube, killing 4 patients who were undergoing a hyperbaric oxygen therapy process in the chamber. 3

In the province of West Java there are many hospitals located in each region, one of which is the city of Bandung. In 2014 there was a fire due to an electrical short circuit which caused the radiology room in the hospital to burn to the ground. Another fire also occurred in 2018 in Kuningan Regency due to an electric short circuit, although there were no victims, seven patients were evacuated from the nearest hospital. 4

The Bogor City Fire Department (Damkar), West Java, disclosed the number of fire cases in this area which reached 196 cases during 2018. This figure increased by 10 percent from the previous year when there were 178 cases. During 2018 there were 196 locations, in the case of fires during 2018 the causes were still the same as in previous years, which were dominated by electrical short circuits and human error factors. Meanwhile, the Deputy Regent of Bogor in the same place did not deny the high potential for fire disasters in his area. Unfortunately, the high potential for fire disaster is not matched by the availability of sufficient infrastructure. As well as the provision of Firefighters posts in each region in Bogor. Not yet covering all areas of Bogor, only a few areas have fire extinguishers. In 2019, we hope that what has not been done gradually in terms of fulfilling this supporting infrastructure can be fulfilled by not only relying on funds from the Regional Revenue and Expenditure Budget (APBD), but also from the involvement of entrepreneurs in the Bogor area.



At the momentum of the 100th Anniversary of the Bogor Firefighters Service, they have made an inventory of the needs of the Fire Service in the Bogor area. 5

Factors Causing a Fire occurs because there are 3 elements/sources which are commonly called the fire triangle, if the three elements are incomplete, then the requirements for a fire to occur cannot be fulfilled. The three elements that cause fires are: flammable materials (fuel), solid, liquid or gas (wood, paper, textiles, gasoline, oil, etc.). Heat/temperature (heat), in environments that have high temperatures (heat sources from sunlight, electricity (short circuit), heat mechanical energy (friction), chemical reactions, compressed air. Oxygen, O<sub>2</sub> content/content is determined by percentage (%) , the greater the oxygen level, the more intense the fire will burn, while at an oxygen level of less than 12% there will be no fire burning. Under normal conditions the oxygen level in free air is around 21%, so air has sufficient combustion activity. 6

The impact of the fire will be that many parties will be harmed, not only direct losses but can also cause indirect losses, such as compensation costs for workers, and also a decrease in the image of an institution, etc. Due to the large number of losses, it is necessary to make efforts to prevent fires or at least be able to reduce the risks posed when a fire occurs. One of the factors that can exacerbate the occurrence of a fire and cause large losses is inadequate fire protection facilities because their use is not suitable and inappropriate, besides that there is also the error factor in the maintenance of fire extinguishers. 7

In accordance with Law No. 44 of 2009 concerning Hospitals in chapter V, article I, it is stated that hospitals must meet the prerequisites for location, building, infrastructure, human resources, pharmacy, and equipment. One of the hospital infrastructures referred to in this article is the prevention and control of fires which must meet standards. This is based on Law Number 1 of 1970 in Article 3 paragraph 1 regarding work safety requirements, namely preventing reducing and extinguishing fires and Article 9 paragraph 3 which states that administrators are required to foster the workforce in preventing, overcoming fires and improving K3. (Occupational Health and Safety). As health workers, especially hospital employees, they must be able to know about the application of fire extinguishers and their use. In the Regulation of the Minister of Manpower and Transmigration number per-04/Men/1980 concerning the requirements for installing and maintaining a light fire extinguisher (APAR) is a tool that is light and easily serviced by one person to extinguish the fire at the start of a fire, when a fire occurs. not too big yet. 8

The definition of a small fire extinguisher (APAR) is a tool for extinguishing fires that are small in size, meaning a light fire at the start of a fire as first aid and fast in handling fires. APAR which is used manually and directly directed to the position where the initial source of fire was. APAR is easy to carry, fast and precise in the process of extinguishing fires, besides that it is portable and lightweight so that it is easy to approach the fire area. Due to its function for early treatment, fire extinguishers must also be placed in certain places to make it easier to use. 9

The lack of knowledge and information possessed by workers in using APAR often results in large fires that are detrimental to the company, therefore we must change the behavior of workers so that they use APAR at the start of a fire. The use of APAR at the start of a fire is an alternative to preventing large fires. 9

The hospital is a health service institution that provides comprehensive individual health services that provide inpatient, outpatient, emergency, and medical support services (Ministry of Health, 2013). The hospital has medical support including: Laboratory, Ultrasound (ultrasound), Physiotherapy, Nutrition Installation, Radiology, EKG (electrocardiogram), Pharmacy Installation. The hospital also has non-medical support, including: Technician Room, Laundry Installation, Waste Management Installation. 10

The nutritional installation is identical to the kitchen. The kitchen is a place to process raw food ingredients into ready-to-eat food, where adequate equipment is needed and supported by skilled and



agile human resources. The kitchen is also at risk of fire due to cooking equipment such as gas stoves, heaters, ovens, etc. The nutrition installation also provides an emergency code in the form of code red and code blue where this code can indicate a fire, as soon as possible evacuate and extinguish the fire with extinguishers, one of which is an APAR. 10

With the development of medical equipment technology related to electricity, it is required to take part in K3 training, to have good management and supervision of hospital electrical infrastructure, starting from planning, installation, testing, operation, to maintenance, so that the electricity used in medical equipment it is safe and efficient. The Technical Requirements for Hospital Technician Room Infrastructure are intended as a reference in fulfilling the technical requirements for technician room infrastructure to create quality Hospital technician room infrastructure, according to its function, reliable, harmonious, in harmony with its environment. Technical Requirements for Technician Room Infrastructure aims to carry out the functions of Hospital technician room infrastructure that guarantees safety, health, convenience and provide convenience for users of the technician room in the Hospital. 11

In essence, occupational health is an adjustment between work capacity, workload and work environment, if hazards in the work environment are not properly anticipated, it will become an additional burden for workers. Especially for hospital workers in washing installations, they receive potential work threats from the environment if work safety is not properly considered. Laundry Installation is a non-medical support service in which there are danger factors. These hazard factors include physical factors including noise, lighting, chemical factors including dust and chemicals, biological factors such as fungi, bacteria and viruses. Physiological factors such as machine construction and work attitudes, mental-psychological factors such as work atmosphere and work relations. Uncontrolled hazard factors can cause work accidents and occupational diseases that disrupt the work process. 12

Roni Kurniawan, 2016 A number of patients and nurses panicked when the red rooster went berserk in the nutrition installation room on the 2nd floor of the Bandung City Mother and Child Hospital, Friday, April 29. Several burnt victims were immediately rushed out of the RSIA building while receiving medical treatment. Meanwhile, other patients wandered out of the building and were evacuated to a safer place. The fire started when the fire started burning the RSIA kitchen. Smoke billowed from the room and made doctors, nurses and patients in the treatment room panic and immediately ran out.

The fire started when the fire started burning the RSIA kitchen. Smoke billowed from the room and made doctors, nurses and patients in the treatment room panic and immediately ran out. As a result of the fire, the courtyard of the RSIA building was filled with patients and nurses who reached the middle of Jalan Astana Anyar. Several women who were pregnant and about to give birth were also evacuated by officers. Not a few employees and families of patients who were waiting suffered burns to their feet, hands and face. Two ambulances and three fire engines arrived at the scene of the fire and immediately put out the fire that was raging on the third floor. Not only that, several patients and nurses were trapped on the second and third floors of the four-floor building. The incident was a disaster preparedness simulation carried out by RSIA Bandung together with the Bandung City Fire Prevention and Management Service (DPPK), the Police, the Army, and the Bandung City Satpol PP. The purpose of this simulation is as a form of training and testing preparedness when a disaster occurs. Because we do not know when a disaster will occur. 13

Yervi Hesna, 2015 In previous research on the sources of fires in hospitals, researchers also found several things that have the potential to cause fires in hospitals, such as the use of several types of chemicals that are at risk of exploding and burning, such as flammable chemical types; alcohol ethanol, propanol, this type of chemical is highly flammable, apart from that, types of oxidizing chemicals such as benzoyl peroxide, these chemicals will cause a fire if they react with other chemical



liquids. The use of a generator engine as a backup electric power where the generator is not accompanied by an APAR, there are electric boxes with high capacity, installation of electrical cables in the hospital area which have been peeled off which can cause sparks, the use of very large electric power for radiology rooms, the use and storage of high-pressure gas cylinders, the storage of gas cylinders here, some are only placed behind the building so that supervision for pressurized gas cylinders is lacking, the room for filling pressurized cylinders without being accompanied by an APAR and the use several stoves and LPG gas cylinders in the hospital kitchen, besides that the researchers also found several cigarette butts that were thrown in the trash while still burning. In the past 4 years, RSUD Dr. M. Ashari Pemalang experienced 2 fire disasters, the first occurred in 2011, a fire occurred in a generator which suddenly caused a spark, then occurred in 2013, namely an incident caused by an electrical cable installation that was peeled off in the generator storage area which caused a spark, but the two fires did not cause any casualties, the fire only caused material losses such as the replacement of the chipped electrical cable installation and the replacement of the generator engine which was burnt and cannot be reused. 14

Yandi Deslatama, 2015 Panic occurred at the Banten Regional General Hospital (RSUD) on Jalan Syekh Nawawi Al-Bantani, Serang City. The laundry room at the hospital exploded and caught fire. Many patients and employees at the local government-owned hospital rushed out of the room for fear that the fire would spread.

The fire occurred at noon, but the flames did not increase after the firefighters (Damkar) moved quickly. 2 fire engines were deployed to tackle the fire and sterilize the area. The explosion was allegedly caused by an error in the installation of the electrical installation by the builders, resulting in an electrical short circuit at the provincial referral hospital. Suspect there is a short circuit in it. This is overloaded (electricity), because there used to be AC and light installation. So the contractors are combined (electricity). 15

Based on the results of observations, it is known that the Nutrition Installation, Technician Room, and Laundry Installation are places that can trigger a fire. The Technician's Room contains electric facilities that control electric currents in various rooms throughout the hospital, the Nutrition Installation has large-sized cooking utensils and the Laundry Installation contains washing equipment, dryers which are directly connected to electricity. The three rooms have fire extinguishers in the room to prevent large fires from occurring at the start of light fires.

The results of the preliminary study that the researchers conducted on August 19, 2019 with a total of 33 respondents, variable knowledge about light fire extinguishers using APAR 13 employees know about light fire extinguishers with proper use of APAR, 10 employees know enough about fire extinguishers light with the use of APAR, 10 employees do not know about light fire extinguishers with the use of APAR. Variable behavior of using APAR 14 employees use APAR according to the standard of the type and method of use, 19 of them use APAR not according to standard. Based on the problems that are known, the researcher is interested in conducting research with the title "Relationship Level of Knowledge of Employees About Light Fire Extinguishers (APAR) with APAR Usage Behavior"

## **RESEARCH METHODS**

This type of research uses Quantitative Analytics. The approach used in this research is cross sectional. The population in this study are employees with a total of 33 employees. The sample in this study was 33 employees who worked in the Nutrition Installation, Technician Room, and Laundry Installation. In taking the sample of this research, a total sampling method or technique was used, namely by taking the whole and the research respondents.

## RESEARCH RESULTS

### a. Knowledge Level of Employees About Light Fire Extinguishers

**Table 1**

**Frequency Distribution of APAR Knowledge Levels**

No	Knowledge Level About APAR	Frequency	Percentage (%)
1	Good	13	39.4
2	Enough	10	30.3
3	Not enough	10	30.3
	Total	33	100

*Source: Primary data processed*

Based on table 4.2 distribution of employee knowledge level sample frequency Regarding Light Fire Extinguishers (APAR) from 33 respondents, 13 respondents (39.4%) had good knowledge.

### b. APAR Usage Behavior

**Table 2**

**Frequency Distribution Based on Behavioral Samples of APAR Use**

No	APAR Usage Behavior	Frequency	Percentage (%)
1	Positive	14	42.4
2	Negative	19	57.6
	Total	33	100

*Source: Primary data processed*

Based on table 4.3 of the sample frequency distribution of APAR usage behavior from 33 respondents, it was found that 19 respondents (57.6%) had negative behavior.

## 2. Bivariate Analysis

The bivariate analysis carried out aims to determine whether there is a relationship between the independent variables (Independent), namely the Knowledge Level of Employees About Light Fire Extinguishers (APAR) (Dependent), namely the Behavior of Using APAR, the results of the bivariate analysis will be presented in the following table:

**Table 3**  
**Correlation between Knowledge Level of Employees About Light Fire Extinguishers (APAR) with APAR Usage Behavior**

Knowledge level	Behavior of APAR Use in Nutrition Installation, Technician Room and Laundry Installation				Amount		P Value
	Positive		Negative		N	%	
	N	%	N	%			
Good	11	84.6	2	15.4	13	100	0.001
Enough	2	20.0	8	80.0	10	100	
Not enough	2	20.0	8	80.0	10	100	
Amount	15	45.5	18	54.5	33	100	

Based on the results of the table above, out of 33 respondents, 11 respondents (84.6%) had results Knowledge Level of Employees About Light Fire Extinguishers (APAR) with Positive APAR Usage Behavior. The results of statistical tests using chi square obtained a p value = 0.001, which means that the p value < 0.05, then Ho is rejected and Ha is accepted. This means that there is a relationship between the Knowledge Level of Employees About Light Fire Extinguishers (APAR) and the Behavior of Using APAR.

**DISCUSSION**

a. Knowledge Level of Employees About Light Fire Extinguishers

The knowledge possessed by employees of the nutrition installation, technician room and laundry installation is expected to influence the behavior of APAR use. If the acceptance of a new behavior or the adoption of a behavior is based on knowledge, awareness and a positive attitude then the behavior is lasting. It is better if the behavior is not realized by knowledge and awareness will not last long. 30

Factors that affect knowledge according to Budiman, there are several factors that affect one's knowledge, namely: Education, Occupation, Age, Interests, Experience, Information. 34

The results showed that out of 33 respondents, 13 respondents (39.4%) had a good level of knowledge about fire extinguishers.

The definition of a small fire extinguisher (APAR) is a tool for extinguishing fires that are small in size, meaning a light fire at the start of a fire as first aid and fast in handling fires. APAR which is used manually and directly directed to the position where the initial source of fire was. APAR is easy to carry, fast and precise in the process of extinguishing fires, besides that it is portable and lightweight so that it is easy to approach the fire area. Due to its function for early treatment, fire extinguishers must also be placed in certain places to make it easier to use.

Research Rizki Prasetya Wardana 2017 Analysis of Fire Prevention and Control Efforts at PT Pertamina Lubricants Production Unit Gresik, This research is an observational and descriptive study using a cross sectional design. The results of this study indicate that PT. Pertamina Lubricants Production Unit Gresik does not have a specific and written policy regarding efforts to prevent and control fires, a fire management team has been formed called the OKD team and has carried out fire prevention training although currently it is not held regularly. 17

The researcher's assumptions related to the results of the study explain that the level of employee knowledge about light fire extinguishers is good because it is seen from the results of the statement questionnaire that has the highest value.

b. APAR Usage Behavior

Behavior is an activity or activity of the organism (living thing) concerned. Therefore, from a biological point of view, all living things, from plants, animals to humans, behave, because they have their own activities, so what is meant by human behavior is essentially the actions or activities of humans themselves which have a very wide range. wide.

Factors that influence behavior are predisposing factors, which are manifested in knowledge, attitudes, beliefs, beliefs, values, social economy and so on.

The results showed that out of 33 respondents, 19 respondents (57.6%) had negative APAR usage behavior.

Knowledge is information that a person has for a particular field. Knowledge scores or tests often fail to predict HR performance because these scores do not successfully measure knowledge and skills as to what should be done on the job. The knowledge test measures the test taker's ability to choose the most correct answer, but cannot see whether someone can do the job based on the knowledge they have.

Research by AR Setiaji Nugroho 2015 Application of Light Fire Extinguishers (APAR) at Ungaran Hospital, Semarang Regency, This research uses a qualitative study method with an observational approach.

The results showed that the application of standards for installation, inspection, maintenance and refilling of APARs was not fully in accordance with the standards, and also showed that the ability and readiness to use APARs was still lacking, due to a lack of awareness of the dangers of fire and the importance of APARs. 18

The researcher's assumptions related to the research results explain that Negative APAR usage behavior and the influencing factor is knowledge

c. Correlation between Knowledge Level of Employees About Light Fire Extinguishers (APAR) with APAR Usage Behavior

Knowledge is information that a person has for a particular field. Knowledge scores or tests often fail to predict HR performance because these scores do not successfully measure knowledge and skills as to what should be done on the job. The knowledge test measures the test taker's ability to choose the most correct answer, but cannot see whether someone can do the job based on the knowledge they have.

Employee behavior is a pattern of action by members of the organization that directly or indirectly affects the effectiveness of the organization. Work behavior is the ability to work and the behaviors of employees where they show action in carrying out the tasks in their place of work.

Statistical test results obtained  $p$  value = 0.001, which means  $p$  value  $\leq 0.05$ . So the null hypothesis is rejected and the alternative hypothesis is accepted. So that there is a relationship between the level of employee knowledge about light fire extinguishers and the behavior of using fire extinguishers.

Agatha Andry H's 2015 research on the Application of Fire Extinguishers and Evacuation Routes and Fire Fighting at Dr.R.Soetijono General Hospital, Blera Regency, uses a descriptive method with an observational approach. From the results of this study, data were obtained, namely that out of 36 fire extinguishers, 10 of them were not in accordance with PERMENAKER regulations No.04/MEN/1980 and also the existing evacuation routes were not in accordance with SNI regulations No. 03-1746-2000. In addition, from the results of interviews, it was found that only fire extinguishers were available. 8

According to the researchers' assumptions, the factor related to behavior is knowledge, the better the knowledge, the more positive the behavior of using fire extinguishers will be.

## CONCLUSION

1. It is known that the frequency distribution of Knowledge Level of Employees About Light Fire Extinguishers. It was found that 13 employees (39.4%) had a good level of knowledge.
2. The frequency distribution of APAR usage behavior is known. It was found that 19 employees (57.6%) had negative APAR usage behavior.
3. There is a relationship between the Knowledge Level of Employees About Light Fire Extinguishers and the Behavior of Using APAR, with a  $p$  value = 0.001 ( $P$  value  $< \alpha$ )

## SUGGESTIONS

1. For the Wijaya Husada Bogor STIKes Institution

The research results obtained are expected to be useful for institutions as material for library literature for further research, used as a source of information about light fire extinguishers, the use of fire extinguishers, and as the development of student materials as well as being used as a scientific reference on Occupational Safety and Health (K3).



2. For Bogor City Labkesda Employees

The results of this study are expected to provide useful information and input in the Behavior of Using Light Fire Extinguishers

3. For Further Researchers

Further research is needed to examine other factors related to knowledge and behavior in using fire extinguishers

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